



# भारत का राजपत्र

## The Gazette of India

प्राधिकार से प्रकाशित  
PUBLISHED BY AUTHORITY

सं० 16]  
No. 16]

नई दिल्ली, शनिवार, अप्रैल 17, 1965 (चैत्र 27, 1887)  
NEW DELHI, SATURDAY, APRIL 17, 1965 (CHAITRA 27, 1887)

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके  
Separate paging is given to this Part in order that it may be filed as a separate compilation

### नोटिस

### NOTICE

नीचे लिखे भारत के असाधारण राजपत्र 5 अप्रैल, 1965 तक प्रकाशित किए गए थे :—

The undermentioned Gazettes of India Extraordinary were published up to the 5th April 1965 :—

अंक Issue No.	संख्या और तारीख No. and Date	द्वारा जारी किया गया Issued by	विषय Subject
34	No. 22-ITC(PN)/65, dated 31st March 1965.	Ministry of Commerce.	Import of Dates from Iraq during October 1964- Sept. 1965 on annual basis.
35	No. 2(5)/65-O & M, dated 31st March 1965.	Do.	Recommendations of the Study Team and Govt. decision thereon regarding improvements of the Import & Export Trade Control Organisation.
सं० 2(5)/65 ओ० एण्ड एम०, दिनांक 31 मार्च 1965		वाणिज्य मंत्रालय	आयात तथा निर्यात व्यापार नियंत्रण संगठन के सुधार के बारे में अध्ययन दल की सिफारिशें तथा उस पर सरकारी निर्णय ।
36	No. 1/65, dated 1st April 1965.	Ministry of Commerce.	Open General Licence No. LXXIX.
37	No. RS. 1/1/65-L, dated 2nd April 1965.	Rajya Sabha Secretariat.	The President prorogues the Rajya Sabha.
38	No. RS. 1/2/65-L, dated 5th April 1965.	Do.	The President summons the Rajya Sabha to meet on the 3rd May 1965.

ऊपर लिखे असाधारण राजपत्रों की प्रतियां प्रकाशन प्रबन्धक, सिविल लाइन्स, दिल्ली के नाम मांगपत्र भेजने पर भेज दी जाएंगी। मांगपत्र प्रबन्धक के पास इन राजपत्रों के जारी होने की तारीख से दस दिन के भीतर पहुंच जाने चाहिए।

Copies of the Gazettes Extraordinary mentioned above will be supplied on Indent to the Manager of Publications, Civil Lines, Delhi. Indents should be submitted so as to reach the Manager within ten days of the date of issue of these Gazettes.

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## भाग I—खण्ड 1

## PART I—SECTION 1

(रक्षा मंत्रालय को छोड़कर) भारत सरकार के मंत्रालयों तथा उच्चतम न्यायालय द्वारा जारी की गई विधीतर नियमों, विनियमों तथा आदेशों और संकल्पों से संबंधित अधिसूचनाएं

Notifications relating to Non-Statutory Rules, Regulations, Orders and Resolutions issued by the Ministries of the Government of India (other than the Ministry of Defence) and by the Supreme Court

वाणिज्य मंत्रालय

आदेश

नई दिल्ली, दिनांक 31 मार्च 1965

सं० 13/28/63-ई०-प्रापर०—भारत रक्षा नियम 1962 के नियम 133-वी० के उप-नियम (1) द्वारा प्रदत्त शक्तियों प्रयोग करती हुई केन्द्रीय सरकार निदेश देती है कि मे० फू शिन एण्ड कं०, लायड रोड, दार्जिलिंग (मालिक श्री चेंग अन जन) की भारत में चल तथा अचल सम्पत्ति जोकि उनकी है, उनके पास है या जिसका प्रबन्ध उनकी ओर से किया जाता है और जो कि भारत सरकार के भूतपूर्व अन्तर्राष्ट्रीय व्यापार मंत्रालय की अधिसूचना संख्या 13/28/63-ई०-प्रापर०, दिनांक 13 अगस्त 1963 के अनुसार भारत शत्रु सम्पत्ति परिरक्षक के अधिकार में आ गई थी अब उनके अधिकार में नहीं रहेगी और मे० फू शिन एण्ड कं० (मालिक श्री चेंग अन जन) के अधिकार में पुनः चली जायगी।

सं० 12/7/64-ई० प्रापर०—भारत रक्षा नियम 1962 के नियम 133-वी० के उप-नियम (1) के द्वारा प्रदत्त शक्तियों का प्रयोग करती हुई केन्द्रीय सरकार निदेश देती है कि श्री सुंग युंग चेंग, 48, डेन्ट मिशन रोड, कलकत्ता की भारत में चल तथा अचल सम्पत्ति जो कि उनकी है, उनके पास है, या जिसका प्रबन्ध उनकी ओर से किया जाता है और जोकि भारत सरकार के वाणिज्य मंत्रालय की अधिसूचना संख्या 12/7/64-ई०-प्रापर०, दिनांक 13 अगस्त 1964 के अनुसार भारत शत्रु सम्पत्ति परिरक्षक के अधिकार में आ गई थी, अब उनके अधिकार में नहीं रहेगी और श्री सुंग युंग चेंग के अधिकार में पुनः चली जाएगी।

दिनांक 2 अप्रैल 1965

सं० 12/25/63-ई०-प्रापर०—भारत रक्षा नियम 1962 के नियम 133-वी० के उप-नियम (1) द्वारा प्रदत्त शक्तियों का प्रयोग करती हुई केन्द्रीय सरकार निदेश देती है कि श्री चेंग काम चोंग, महावीर बिल्डिंग, लादेनला रोड, दार्जिलिंग की भारत में समस्त चल तथा अचल सम्पत्ति जोकि उनकी है, उनके पास है या जिसका प्रबन्ध उनकी ओर से किया जाता है और जोकि भारत सरकार के भूतपूर्व अन्तर्राष्ट्रीय मंत्रालय की अधिसूचना सं० 13/25/63-ई०-प्रापर०, दिनांक 8 अगस्त 1963 के अनुसार भारत शत्रु सम्पत्ति परिरक्षक के अधिकार में आ गई थी, अब उनके अधिकार में नहीं रहेगी और श्री चेंग काम चोंग के अधिकार में पुनः चली जायगी।

डी० एन० बनर्जी, संयुक्त सचिव

स्वास्थ्य मंत्रालय

संकल्प

नई दिल्ली, दिनांक 3 अप्रैल 1965

सं० एफ० 5-51/64-स्था० स्वा० शा०-1—इस मंत्रालय के 5 फरवरी 1965 के संकल्प संख्या एफ० 5-51/64-स्था० स्वा० शा०-1 को और आगे बढ़ते हुए सरकार ने दिल्ली के जल दूषण आदि के कारणों की जांच करने के लिये केन्द्रीय स्वास्थ्य उप-मंत्री की अध्यक्षता में नियुक्त समिति की रिपोर्ट को प्रस्तुत करने की अवधि दिसम्बर 1965 के अन्त तक बढ़ा दी है ताकि यह समिति अपने निर्देश पदों में सम्मिलित विभिन्न प्रश्नों पर पूर्णतया विचार कर सके।

आदेश दिया जाता है कि यह संकल्प पंजाब और उत्तर प्रदेश राज्य सरकारों, दिल्ली संघ क्षेत्र, भारत सरकार के सभी मंत्रालयों, प्रधान मंत्री सचिवालय, राष्ट्रपति के निजी एवं सैनिक सचिवों, भारत के नियंत्रक महालेखा परीक्षक तथा आयोजना आयोग को सूचनार्थ भेज दिया जाय।

आदेश दिया जाता है कि यह संकल्प भारत के राजपत्र में प्रकाशित कर दिया जाए और पंजाब और उत्तर प्रदेश की राज्य सरकारों से अनुरोध कर दिया जाय कि वे सर्वसाधारण की सूचना के लिये इसे राज्य के राजपत्रों में प्रकाशित कर दें।

ज्ञान प्रकाश, संयुक्त सचिव

शिक्षा मंत्रालय

नई दिल्ली, दिनांक 3 अप्रैल 1965

सं० एफ० 2-8/63 पी० ई० 2—इस मंत्रालय की 25 जुलाई 1963 की सम संख्या वाली अधिसूचना में आंशिक संशोधन करते हुए श्री हरबंश सिंह के स्थान पर, श्री हरदयाल सिंह, प्रधान, रेल खेल-कूद नियंत्रण बोर्ड, को राष्ट्रीय खेल-कूद संस्थान, पटियाला के गवर्नर्स बोर्ड में पदेन-सदस्य के रूप में 24 जुलाई 1966 तक नामजद किया जाता है।

2. इस मंत्रालय की 11 दिसम्बर 1964 की सम संख्या वाली अधिसूचना में 'मेजर जनरल जगजीत सिंह अरोड़ा' के स्थान पर कृपया 'मेजर जनरल जगजीत सिंह ओरोड़ा' पढ़िए।

रोशन लाल आनन्द, अवर सचिव

(विज्ञान विभाग)

नई दिल्ली-1, दिनांक 1 अप्रैल 1965

सं० एफ० 3(18)/62-एस० आर० आई०—सर्वसाधारण की जानकारी के लिये अधिसूचित किया जाता है कि समिति पंजीकरण अधिनियम (1860 के 21वें) के अनुसार वैज्ञानिक और औद्योगिक अनुसंधान परिषद की शासी समिति को तथा वैज्ञानिक और औद्योगिक अनुसंधान बोर्ड को दिनांक 1-4-1965 से 3 वर्ष के लिये पुनर्गठित किया गया है। इनमें निम्नलिखित सदस्य होंगे :—

शासी समिति

1-प्रधान मंत्री	अध्यक्ष
2-शिक्षा मंत्री	उपाध्यक्ष
भारत सरकार, नई दिल्ली-1	
3-महानिदेशक, वैज्ञानिक और औद्योगिक अनुसंधान	पदेन सदस्य
4-श्री ए० के० घोष, भारत सरकार के सचिव, शिक्षा मंत्रालय, विज्ञान विभाग, नार्थ ब्लॉक, नई दिल्ली-1	पदेन सदस्य

5—वैज्ञानिक और औद्योगिक अनुसंधान पदेन सदस्य परिषद् के वित्तीय सलाहकार, नई दिल्ली-1		20—प्रो० पी० सी० महाजनोबिस, एफ० सदस्य आर० एस०, सदस्य, योजना आयोग, योजना भवन, नई दिल्ली-1	
6—श्री टी० टी० कृष्णमाचारी, वित्त मंत्री, भारत सरकार, नार्थ ब्लॉक, नई दिल्ली-1	सदस्य	21—डा० सतीश धवन, निदेशक, इण्डियन इन्स्टीट्यूट आफ माईस, बंगलौर-12	सदस्य
7—श्री सी० मुन्नमण्यम खाद्य और कृषि मंत्री, कृषि भवन, नई दिल्ली-1	सदस्य	22—डा० वी० आर० खनोलकर, निदेशक कैंसर अनुसंधान संस्थान, परेल, बम्बई-12 (अध्यक्ष, नेशनल इन्स्टीट्यूट आफ माईमेज)	सदस्य
8—प्रो० हुमायूँ कबीर, पेट्रोलियम और रसायन मंत्री, नार्थ ब्लॉक, नई दिल्ली-1	सदस्य	23—डा० एस० एस० रंधावा, महानिदेशक, सघन कृषि क्षेत्र, और भारत सरकार के विशेष सचिव, खाद्य और कृषि मंत्रालय, कृषि विभाग, कृषि भवन, नई दिल्ली-1	सदस्य
9—श्री टी० एन० सिंह, भारी इंजीनियरिंग मंत्री, उद्योग और संभरण मंत्रालय, उद्योग भवन, नई दिल्ली-1	सदस्य	24—प्रो० पी० महेश्वरी, एफ० आर० सदस्य एस०, अध्यक्ष, वनस्पतिशास्त्र विभाग, दिल्ली विश्वविद्यालय, दिल्ली-7	
10—श्री अशोक मेहता, उपाध्यक्ष, योजना आयोग, योजना भवन, नई दिल्ली-1	सदस्य	25—डा० टी० एस० मुन्नमण्यम, निदेशक, अहमदाबाद टैक्सटाइल इंड- स्ट्रीज रिसर्च एसोसिएशन, नवरंगपुरा, अहमदाबाद-9	सदस्य
11—डा० बी० के० आर० बी० राव, सदस्य, योजना आयोग, योजना भवन, नई दिल्ली-1	सदस्य	26—डा० त्रिगुण सेना, उपकुलपति, जादवपुर विश्वविद्यालय, कलकत्ता-32	सदस्य
12—श्री जे० आर० डी० टाटा, अध्यक्ष, टाटा इंडस्ट्रीज (प्रा०) लि०, बाम्बे हाउस, ब्रूस स्ट्रीट, फोर्ट, बम्बई-1	सदस्य	27—डा० ए० रामास्वामी मुदालियर, इण्डिया स्टीम शिप हाऊस, 21-ओल्ड कोर्ट हाऊस स्ट्रीट, कलकत्ता-1	सदस्य
13—श्री के० के० बिड़ला, 15, इण्डिया एक्सचेंज प्लेस, कलकत्ता-1	सदस्य	28—श्री जे० जे० घन्दी, रेजीडेंट डायरेक्टर, टाटा आयरन एण्ड स्टील कम्पनी लि०, जमशेदपुर	सदस्य
14—श्री अरविन्द एन० मफतलाल, मफतलाल हाऊस, बैकवे रीक्लेमेशन, बम्बई-1	सदस्य	29—श्री एस० एल० किरलोस्कर, अध्यक्ष—किरलोस्कर इंजीनियरिंग कम्पनी, पूना और फेडरेशन आफ इण्डियन चैम्बर आफ कामर्स एण्ड इण्डस्ट्री के अध्यक्ष	सदस्य
15—श्री एच० जे० भाभा, एफ० आर० सदस्य एस०, भारत सरकार के सचिव, परमाणु ऊर्जा विभाग, ओपोलो पायर रोड, बम्बई-1		30—श्री पी० ए० नारियलवाला, निदेशक, टाटा इण्डस्ट्रीज (प्रा०) लि०, ब्रूस स्ट्रीट, फोर्ट, बम्बई-1	सदस्य
16—डा० एस० भगवन्तम, वैज्ञानिक सलाहकार, प्रतिरक्षा मंत्रालय, साऊथ ब्लॉक, नई दिल्ली-1	सदस्य	31—डा० के० ए० हमीद, अध्यक्ष, सिपला लेबोरेटरी, 289, बलासिस रोड, बायकला, बम्बई-8	सदस्य
17—प्रो० एस० एन० बोस, एफ० आर० सदस्य एस०, राष्ट्रीय प्राध्यापक, 22-ईश्वर मिल लेन, कलकत्ता-6		32—डा० विक्रम ए० साराभाई, निदेशक, फिजिकल रिसर्च लेबोरेटरी, नवरंगपुरा, अहमदाबाद-9	सदस्य
18—डा० डी० एस० कोठारी, अध्यक्ष, विश्वविद्यालय अनुदान आयोग, बहादुरशाह जफर मार्ग, नई दिल्ली-1	सदस्य	33-34—दो सदस्य वैज्ञानिक और औद्योगिक अनुसंधान बोर्ड द्वारा निर्वाचित किए जाएंगे	
19—डा० डी० एन० वाडिया, एफ० आर० सदस्य एस०, भू-वैज्ञानिक सलाहकार, परमाणु ऊर्जा विभाग, साऊथ ब्लॉक, नई दिल्ली			

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2—शिक्षा मंत्री,	उपाध्यक्ष	बम्बई विश्वविद्यालय,	
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13—कर्नल बी० एस० तनेजा,	सदस्य	22—प्रो० आर० सी० मेहरोत्रा,	सदस्य
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27—डा० वाई० नायडुम्मा, निदेशक, केन्द्रीय चमड़ा अनुसंधान संस्थान, अडियार, मद्रास-20	सदस्य
28—डा० बी० आर० निशावन, निदेशक, राष्ट्रीय धातुकर्म प्रयोग- शाला, जमशेदपुर	सदस्य
29—डा० ए० आर० वर्मा, निदेशक, राष्ट्रीय भौतिक प्रयोगशाला, हिल साइड रोड, नई दिल्ली-12	सदस्य
30—डा० अमरजीत सिंह, निदेशक, केन्द्रीय इलेक्ट्रॉनिक्स इंजीनियरी अनुसंधान संस्थान, पिलानी	सदस्य
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35—डा० टी० एस० सुब्रमण्यम, निदेशक, अहमदाबाद टैक्सटाइल इण्डस्ट्रीज रिसर्च एसोसिएशन, नवरंगपुरा, अहमदाबाद-9	सदस्य
36—डा० त्रिगुण सेन, उप-कुलपति, जादवपुर विश्वविद्यालय, कलकत्ता-32	सदस्य

ए० के० मुस्तफी, संयुक्त सचिव पदेन

#### संचार विभाग

##### संकल्प

नई दिल्ली, दिनांक 1 मई 1965

सं० 12-ओ० सी० (46)/63—भारत सरकार ने अन्य अनेक देशों के साथ-साथ, एक भूमाण्डलिक व्यावसायिक संचार उपग्रह प्रणाली (ग्लोबल कामर्शियल कम्यूनिकेशंस सैटेलाइट सिस्टम) की अंतरिम व्यवस्था स्थापित करने के करार पर, और तदधीन एक विशेष करार पर हस्ताक्षर किये हैं। इन करारों में 1967 के अन्त तक भूमाण्डलिक व्यावसायिक संचार उपग्रह प्रणाली स्थापित करने की व्यवस्था है। उपग्रह प्रणाली में भारत के

भाग लेने की योजना के समुचित नीति-निर्देशन और तकनीकी आयोजना के सुनिश्चयन के लिये भारत सरकार ने दो अन्तर्विभागीय समितियाँ स्थापित करने का निश्चय किया है जिनके नाम हैं— नीति समिति और तकनीकी समन्वय समिति, और उनकी संघटना और कार्य निम्न प्रकार होंगे :—

#### I. नीति समिति संघटना

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| 1. सचिव, संचार विभाग                                      | अध्यक्ष |
| 2. संयुक्त सचिव, वित्त मंत्रालय<br>(डाक और तार)           | सदस्य   |
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| 4. महानिदेशक, विदेश संचार सेवा, बम्बई                     | सदस्य   |
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| 6. अणु ऊर्जा विभाग का एक प्रतिनिधि                        | सदस्य   |
| 7. रक्षा मंत्रालय का एक प्रतिनिधि                         | सदस्य   |

नीति समिति का कार्य होगा कि भूमाण्डलिक व्यावसायिक संचार उपग्रह प्रणाली में भारत के भाग लेने की योजना की प्रभावी और सामयिक कार्यान्विति का सुनिश्चयन करे और समय-समय पर इस योजना सम्बन्धी सभी महत्वपूर्ण और नीति विषयक मामलों में सरकार को सलाह दे।

#### II. तकनीकी समन्वय समिति संघटना

- |   |         |
|---|---------|
| 1. महानिदेशक, विदेश संचार सेवा                            | अध्यक्ष |
| 2. उप-महानिदेशक (परिचात), विदेश<br>संचार सेवा, बम्बई      | सदस्य   |
| 3. मुख्य इंजीनियर, विदेश संचार सेवा, बम्बई                | सदस्य   |
| 4. बेतार सलाहकार, बेतार आयोजना तथा<br>समन्वय, संचार विभाग | सदस्य   |
| 5. सदस्य (दूरसंचार विकास), डाक तथा<br>तार बोर्ड           | सदस्य   |
| 6. निदेशक, दूरसंचार अनुसंधान केन्द्र, डाक<br>और तार विभाग | सदस्य   |
| 7. अणु ऊर्जा विभाग का एक प्रतिनिधि                        | सदस्य   |
| 8. रक्षा मंत्रालय का एक प्रतिनिधि                         | सदस्य   |

तकनीकी समन्वय समिति का कार्य होगा कि भारत में उपग्रह संचार के भूमि-स्थित केन्द्र की स्थापना के विषय में समस्त ध्योरे तैयार करे और, समय-समय पर, इस योजना के कार्यान्वयन में अन्तर्ग्रस्त सारे तकनीकी मामलों में सरकार को सलाह दे।

#### आदेश

आदेश दिया जाता है कि इस संकल्प की एक प्रति समस्त सम्बद्ध व्यक्तियों को भेज दी जाये।

यह भी आदेश दिया जाता है कि सामान्य सूचना के लिये इस संकल्प को भारत के राजपत्र में प्रकाशित किया जाय।

लक्ष्मी चन्द्र जैन, सचिव

#### सिंचाई व बिजली मंत्रालय

##### संकल्प

नई दिल्ली, दिनांक 6 मार्च 1965

सं० डी० डब्ल्यू० 5-501 (4)/64—इस मंत्रालय के संकल्प सं० डी० डब्ल्यू० 5-501 (4)/64, तिथि 9 अक्टूबर 1964 के बाद, सरकार ने आन्ध्र प्रदेश के डेल्टा क्षेत्र में बाढ़ तथा आप्लावन को रोकने हेतु व्यापक योजना बनाने के लिये जो एक विशेषज्ञ

कमेटी बनाई थी, उसी की रिपोर्ट प्रस्तुत करने की अवधि बढ़ा कर 30 जून 1965 तक कर दी है।

#### आदेश

आदेश दिया जाता है कि इस संकल्प की प्रतिलिपि भारत के राजपत्र में प्रकाशित कर दी जाए तथा प्रतिलिपियां संबंधित अधिकारियों को भी भेजी जाएं।

आदेश दिया जाता है कि संकल्प की एक प्रतिलिपि आन्ध्र प्रदेश की राज्य सरकार को इस प्रार्थना के साथ भेजी जाए कि वे इस संकल्प को राज्य के राजपत्र में साधारण जानकारी के लिये प्रकाशित करें।

यह भी आदेश दिया जाता है कि संकल्प की एक-एक प्रतिलिपि भारत सरकार के सभी मंत्रालयों, योजना आयोग, प्रधान मंत्री के सचिवालय, राष्ट्रपति के सैनिक सचिव, लोक सभा/राज्य सभा सचिवालय, संसदीय मामलों के विभाग और नियंत्रक तथा महा-लेखापरीक्षक को भी भेजी जाए।

के० जी० आर० अय्यर, संयुक्त सचिव

#### संकल्प

नई दिल्ली, दिनांक 7 अप्रैल 1965

सं० 11 (4)/64-वि० का०-1—व्यास नियंत्रण बोर्ड की स्थापना संबंधित भारत सरकार के सिचाई व बिजली मंत्रालय के संकल्प संख्या 25/11/60-वि० का० 6, तिथि 10 फरवरी 1961 में निम्नलिखित संशोधन किया जाता है :—

पैरा 3 के पद 10 में तथा पैरा 6 के पद 4 में,

“परियोजना सचिव, राजस्थान” के स्थान पर निम्नलिखित पढ़िए :

“सचिव, राजस्थान सरकार, कार्यभारी, उपनिवेशन विभाग”।

#### आदेश

आदेश दिया जाता है कि उपर्युक्त संशोधन पंजाब, राजस्थान और हिमाचल प्रदेश की सरकार, भारत सरकार के मंत्रालयों, प्रधान मंत्री के सचिव, केबिनेट सचिवालय, राष्ट्रपति और योजना आयोग के सचिव को भेजा जाय।

यह भी आदेश दिया जाता है कि यह संशोधन भारत के राजपत्र में भी प्रकाशित कर दिया जाय तथा राज्य सरकारों से प्रार्थना की जाए कि वे इसको अपने राजपत्रों में आम जानकारी के लिये प्रकाशित कर दें।

वि० नन्जप्पा, सचिव

#### श्रम और रोजगार मंत्रालय

##### संकल्प

नई दिल्ली, दिनांक 3 अप्रैल 1965

सं० WB-12(1)/64—दूसरी पंचवर्षीय योजना के अध्याय XXVII के पैरा 25 और तीसरी पंचवर्षीय योजना के अध्याय XV के पैरा 20 में की गई सिफारिशों के अनुसरण में भारत सरकार के भारी रसायन और उर्वरक उद्योगों के लिए एक मजदूरी बोर्ड स्थापित करने का निश्चय किया है। बोर्ड का गठन इस प्रकार होगा :—

##### अध्यक्ष

श्री एम० श्रीराममूर्ति

##### स्वतंत्र सदस्य

- (i) श्री पी० आर० चक्रवर्ती, संसद सदस्य।
- (ii) प्रोफेसर बी० बी० रामानाथम।

#### मालिकों के प्रतिनिधि सदस्य

- (i) श्री डी० पी० माधुर।
- (ii) इंडियन कैमिकल्स मैनुफैक्चरिंग एसोसिएशन, बम्बई, का एक नामित व्यक्ति।

#### कामगारों के प्रतिनिधि सदस्य

- (i) राष्ट्रीय मजदूर कांग्रेस का एक नामित व्यक्ति।
- (ii) अखिल भारतीय ट्रेड यूनियन कांग्रेस का एक नामित व्यक्ति।

2. बोर्ड के विचारार्थ विषय ये होंगे :—

- (क) उन कर्मचारियों (श्रमिक, क्लर्क, पर्यवेक्षक आदि) के वर्ग निश्चित करना जिन्हें प्रस्तावित मजदूरी-निर्धारण के प्रभावक्षेत्र में लाया जाता चाहिए ;
- (ख) उचित मजदूरी समिति की रिपोर्ट में निर्धारित उचित मजदूरी के मिद्धान्तों के आधार पर एक मजदूरी-विन्यास तैयार करना।

**व्याख्या :**—मजदूरी विन्यास तैयार करते समय बोर्ड को उचित मजदूरी सम्बन्धी बातों के अलावा नीचे लिखी बातों पर भी ध्यान देना चाहिए :—

- (i) विकासशील अर्थव्यवस्था में भारी रसायन और उर्वरक उद्योगों की आवश्यकताएं ;
- (ii) सामाजिक न्याय के लिए आवश्यक तत्व ;
- (iii) मजदूरी अंतरों को ऐसे तरीके से निर्धारित करने का आवश्यकता जिससे कर्मचारियों को अपना कौशल बढ़ाने की प्रेरणा मिले ; और
- (iv) कार्य के अनुरूप अदायगी की पद्धति लागू करने की वांछनीयता।

**व्याख्या :**—कार्य के अनुरूप अदायगी की पद्धति लागू करते समय बोर्ड न्यूनतम (गुजारे लायक) मजदूरी निर्धारित करने की और अतिश्रम तथा अवांछनीय अनुचित गति से काम करने से बचाने की आवश्यकता को ध्यान में रखेगा।

3. बोर्ड का मुख्यालय मद्रास में होगा। बोर्ड में पत्र-व्यवहार निम्नलिखित पते पर होगा :—

अध्यक्ष, भारी रसायन और उर्वरक उद्योग सम्बन्धी केन्द्रीय मजदूरी बोर्ड, 'लोमन हाऊस', नं० 5, वेनकटानारायण रोड, टी० नगर, मद्रास-17।

#### आदेश

आदेश दिया जाता है कि इस संकल्प की प्रति सभी संबंधित व्यक्तियों को भेजी जाए।

यह भी आदेश दिया जाता है कि इस संकल्प को भारत के राजपत्र में आम सूचना के लिए प्रकाशित किया जाए।

सं० WB-3(26)/64—काफी बागान उद्योग के केन्द्रीय मजदूरी बोर्ड ने, जिसकी नियुक्ति भारत सरकार ने अपने संकल्प संख्या WB-3(5)/61-1, तारीख 7 जुलाई, 1961 द्वारा की थी, काफी बागान उद्योग के कामगारों की स्टाफ और गैर-स्टाफ श्रेणियों की मजदूरी में दूसरी अंतरिम वृद्धि मंजूर करने के लिए सिफारिशें की हैं, जो कि परिशिष्ट में दी गई हैं।

2. मजदूरी बोर्ड ने 1 मार्च, 1965 को हुई अपनी बैठक में आगे सिफारिश की है कि उपर्युक्त कामगारों को दूसरी अंतरिम मजदूरी वृद्धि 1 जनवरी, 1965 से उसी दर से मिलनी जारी रहनी चाहिए।

3. सरकार ने बोर्ड की सिफारिशों को स्वीकार करने और नियोजकों से उन्हें यथाशीघ्र लागू करने के लिए अनुरोध करने का निश्चय कर लिया है।

**आदेश**

आदेश दिया जाता है कि इस संकल्प की प्रति संबंधित व्यक्तियों को भेजी जाय।

यह भी आदेश दिया जाता है कि इस संकल्प को आम सूचना के लिए भारत के राजपत्र में प्रकाशित किया जाए।

पी० एम० मेनन, सचिव

**परिशिष्ट****काफी बागान उद्योग का केन्द्रीय मजदूरी बोर्ड**

मैसूर, मद्रास और केरल राज्यों के कर्मचारियों तथा मद्रास और केरल राज्यों के उन कर्मचारियों की मजदूरी के बारे में जो अपवर्जित श्रेणियों के नाम से जाने जाते हैं, बोर्ड ने सर्वसम्मत निर्णय लिए हैं। कुछ एक छोटे मामलों पर निर्णय लेने बाकी हैं, जिन्हें अधिक समय नहीं लगेगा। इस बीच मजदूरी बोर्ड की रिपोर्ट का मसौदा तैयार किया जा रहा है और शीघ्र ही उसे अंतिम रूप दे दिया जाएगा। चाय बागान उद्योग के केन्द्रीय मजदूरी बोर्ड ने चाय बागान उद्योग के कामगारों और कर्मचारियों को दूसरी अंतरिम मजदूरी वृद्धि दे दी है। काफी बागानों में क्षेत्रीय कर्मचारियों और मेस्त्रियों की मजदूरी के सम्बन्ध में बोर्ड के निर्णय को 1-7-64 और 1-1-65 से लागू करने के बारे में इस बोर्ड की सिफारिशें सरकार द्वारा स्वीकार कर ली गई हैं और अधिसूचित कर दी गई हैं। चूंकि काफी बागान उद्योग में स्टाफ और गैर-स्टाफ श्रेणियों को बोर्ड द्वारा पहली अंतरिम मजदूरी वृद्धि मंजूर किए जाने के बाद कोई मजदूरी-वृद्धि प्राप्त नहीं हुई है, इसलिए बोर्ड का विचार है कि उन्हें भी तत्काल दूसरी अंतरिम मजदूरी वृद्धि मिलनी चाहिए। अतः यह सर्वसम्मत सिफारिश की जाती है कि—

(1) मद्रास, मैसूर और केरल राज्यों के सभी काफी बागानों में नियुक्त कर्मचारियों तथा मद्रास और केरल के काफी बागानों में नियुक्त कर्मचारियों की अपवर्ती श्रेणियों को 1 जुलाई, 1964 से दिसम्बर, 1964 के अन्त तक निम्नलिखित आधार पर दूसरी अंतरिम मजदूरी वृद्धि दी जानी चाहिए :—

(क) जो प्रति मास 100/- रु० या कम मजदूरी पाते हैं उन्हें 10/- रु० प्रति मास।

(ख) जो प्रति मास 100/- रु० से अधिक परन्तु 200/- रु० तक कुल मजदूरी पाते हैं उन्हें 16/- रु० प्रति मास।

(ग) जो प्रति मास 200/- रु० से अधिक मजदूरी पाते हैं उन्हें 22/- रु० प्रति मास।

**व्याख्या :—**“कुल मजदूरी” से अभिप्राय मूल वेतन, महंगाई भत्ता, नौकर भत्ता और पहली अंतरिम मजदूरी वृद्धि की राशि से है।

(2) मैसूर राज्य में गैर स्टाफ श्रेणियों अर्थात् ट्रैक्टर ड्राइवरों, गाड़ी ड्राइवरों, मैकेनिकों आदि, जिन पर बोर्ड की 9-12-1964 की सिफारिशें लागू नहीं होनी और जो उपर्युक्त सिफारिशों की धारा (1) में नहीं आते, तथा मद्रास और केरल राज्य में अपवर्ती श्रेणियों के अलावा गैर-स्टाफ श्रेणियों को दूसरी अंतरिम मजदूरी वृद्धि 1-7-1964 से 31-12-1964 तक निम्न दरों पर दी जानी चाहिए :—

(क) मासिक वेतन पाने वाले कामगारों को 7.50 रु० प्रति मास ;

(ख) दिहाड़ी पर काम करने वाले कामगारों को 20 पैसे प्रति दिन।

कर्मचारियों की स्टाफ और गैर-स्टाफ श्रेणियों के लिए नए मजदूरी विन्यास के बारे में बोर्ड की सिफारिशें, जो कि 1 जनवरी, 1965 से लागू हैं, बोर्ड की अंतिम रिपोर्ट में शामिल की जाएंगी।

(ह०) एन पी० दवे।

(ह०) यू० के० लक्ष्मण गोडा।

(ह०) एम० बी० करिआपा।

(ह०) एम० सी० नरसिंहन।

(ह०) पी० वृद्धागिरि।

(ह०) एन० अहमद, सचिव,

बंगलौर, तारीख 2 फरवरी, 1965।

**MINISTRY OF COMMERCE**

New Delhi, the 31st March 1965

No. 13/28/63-E.Pty.—In exercise of the powers conferred by sub-rule (1) of rule 133-V of the Defence of India Rules, 1962, the Central Government hereby directs that all property in India, movable and immovable, belonging to, or held by, or managed on behalf of Messrs. FOO SHIN & Co., Lloyd Road, Darjeeling (owner Mr. Cheng An Jan) which vests in the Custodian of Enemy Property for India by virtue of the notification of the Government of India in the late Ministry of International Trade No. 13/28/63-E.Pty., dated the 13th August 1963, shall cease to vest in the said Custodian and shall revert in the said Messrs. FOO SHIN & Co. (owner Mr. Cheng An Jan).

No. 12/7/64-E.Pty.—In exercise of the powers conferred by sub-rule (1) of rule 133-V of the Defence of India Rules, 1962, the Central Government hereby directs that all property in India, movable and immovable belonging to, or held by, or managed on behalf of Mr. SUNG YUNG CHENG of 48, Dent Mission Road, Calcutta, which vests in the Custodian of Enemy Property for India by virtue of the notification of the Government of India in the Ministry of Commerce No. 12/7/64-E.Pty., dated the 13th August 1964, shall cease to vest in the said Custodian and shall revert in the said Mr. SUNG YUNG CHENG.

The 2nd April 1965

No. 13/25/63-E.Pty.—In exercise of the powers conferred by sub-rule (1) of rule 133-V of the Defence of India Rules, 1962, the Central Government hereby directs that all property in India, movable and immovable, belonging to, or held by, or managed on behalf of Mr. CHENG KAM CHONG, Mahabir Building, Ladenla Road, Darjeeling, which vests in the Custodian of Enemy Property for India by virtue of the notification of the Government of India in the late Ministry of International Trade No. 13/25/63-E.Pty., dated the 8th

August 1963, shall cease to vest in the said Custodian and shall revert in the said Mr. CHENG KAM CHONG.

D. N. BANERJEE, Jt. Secy.

**RESOLUTION**

New Delhi, the 5th April 1965

Study Group for Coal

No. 32/5/65-M&F.—In partial modification of their Resolution No. 32/5/65/M&F dated the 18th January, 1965, the Government of India have decided that in para 3 of the Resolution regarding constitution of the Study Group for Coal, the name of Shri A. C. Bose, Coal Controller, Calcutta, may be added after the name of Shri S. K. Mukherjee, Joint Secretary, Ministry of Commerce.

**ORDER**

ORDERED that the resolution be published in the Gazette of India.

S. K. MUKHERJEE, Jt. Secy.

**MINISTRY OF HEALTH****RESOLUTION**

New Delhi, the 3rd April 1965

No. F. 5-51/64-LSG.I.—Further to this Ministry's Resolution No. F. 5-51/64-LSG I, dated the 5th February 1965, Government are pleased to extend the period for submission of the report of the Committee set up under the Chairmanship of Union Deputy Minister for Health to enquire into the causes of contamination of Delhi's water supply etc. up to the end of December 1965 to enable the Committee



to give full consideration to the various points included in its terms of reference.

#### ORDER

ORDERED that this Resolution be communicated to State Governments of Punjab and Uttar Pradesh, the Union Territory of Delhi, all the Ministries of the Government of India, Prime Minister's Secretariat, the Private and Military Secretaries to the President, the Comptroller and Auditor General of India and the Planning Commission for information.

ORDERED that the Resolution be published in the Gazette of India and that the State Governments of Punjab and Uttar Pradesh be requested to publish it in the State Gazettes for general information.

GIAN PRAKASH, Jt. Secy.

#### RESOLUTION

*New Delhi, the 5th April 1965*

No. F. 4-38/64-FPII.—In partial modification of this Ministry's Resolution No. F. 4-38/63-FPII dated the 29th September 1964, constituting the Committee to study the question of legalisation of abortion in the country, the Government of India have now decided that the Committee will submit their report by the 30th June 1965, instead of 31st March 1965, as stated in para 3 of the Resolution mentioned above.

BASHESHA NATH, Under Secy.

#### MINISTRY OF EDUCATION

*New Delhi, the 3rd April 1965*

No. F. 2-6/63-PE2.—In partial modification of the Ministry of Education Notification of even number dated the 25th July 1963,

Shri Hardyal Singh, President,

Railway Sports Control Board,

is nominated on the Board of Governors of the National Institute of Sports, Patiala as *ex-officio* member till 24-7-66, *vice* Shri Harbans Singh.

2. In the Ministry of Education Notification of even number dated the 11th December 1964, please read "Major General Jagjit Singh Aurora" for Major General Jagjit Singh Arora".

R. L. ANAND, Under Secy.

#### (Department of Science)

*New Delhi-1, the 1st April 1965*

No. P.3(18)/62-SRI.—It is notified for general information that for the purposes of the Societies Registration Act (XXI of 1860), the Governing Body of the Council of Scientific and Industrial Research and the Board of Scientific and Industrial Research have been reconstituted for a period of three years with effect from 1-4-1965 and shall consist of the following:

#### GOVERNING BODY

##### President

1. Prime Minister.

##### Vice-President

2. Minister of Education,  
Government of India,  
New Delhi-1.

##### Ex-Officio Members

3. Director-General,  
Scientific and Industrial Research.
4. Shri A. K. Ghosh,  
Secretary to the Government of India,  
Ministry of Education,  
Department of Science, North Block,  
New Delhi-1.
5. P.A. to C.S.I.R.

##### Members

6. Shri T. T. Krishnamachari,  
Minister of Finance,  
Government of India,  
North Block,  
New Delhi-1.

7. Shri C. Subramanian,  
Minister of Food & Agriculture,  
Krishi Bhavan,  
New Delhi-1.
8. Prof. Humayun Kabir,  
Minister of Petroleum & Chemicals,  
North Block,  
New Delhi-1.
9. Shri T. N. Singh,  
Minister of Heavy Engineering in the Ministry of  
Industry & Supply,  
Udyog Bhavan,  
New Delhi-11.
10. Shri Ashoka Mehta,  
Deputy Chairman,  
Planning Commission,  
Yojna Bhavan,  
New Delhi-1.
11. Dr. V. K. R. V. Rao,  
Member, Planning Commission,  
Yojna Bhavan,  
New Delhi-1.
12. Shri J. R. D. Tata,  
Chairman,  
Tata Industries (P) Ltd.,  
Bombay House, Bruce Street, Fort,  
Bombay-1.
13. Shri K. K. Birla,  
15, India Exchange Place,  
Calcutta-1.
14. Shri Arvind N. Mafatlal,  
Mafatlal House,  
Backbay Reclamation,  
Bombay-1.
15. Dr. H. J. Bhabha, FRS,  
Secretary to the Government of India,  
Department of Atomic Energy,  
Apollo Pier Road,  
Bombay-1.
16. Dr. S. Bhagvantam,  
Scientific Adviser to the Minister of Defence,  
South Block,  
New Delhi-11.
17. Prof. S. N. Bose, FRS,  
National Professor,  
22-Iswar Mill Lane,  
Calcutta-6.
18. Dr. D. S. Kothari,  
Chairman,  
University Grants Commission,  
Bhadurshah Zafar Marg,  
New Delhi-1.
19. Dr. D. N. Wadia, FRS,  
Geological Adviser,  
Department of Atomic Energy,  
South Block,  
New Delhi-11.
20. Prof. P. C. Mahalanobis, FRS,  
Member,  
Planning Commission,  
Yojna Bhavan,  
New Delhi-1.
21. Dr. Satish Dhawan,  
Director,  
Indian Institute of Science,  
Bangalore-12.
22. Dr. V. R. Khanolkar,  
Director,  
Cancer Research Institute, Parel,  
Bombay-12.  
(President, National Institute of Sciences).

23. Dr. M. S. Randhawa,  
Director General,  
Intensive Agricultural Areas and Special Secretary  
to the Government of India,  
Ministry of Food & Agriculture,  
Department of Agriculture,  
Krishi Bhavan,  
New Delhi-1.
24. Prof. M. Maheshwari, FRS,  
Head of the Department of Botany,  
University of Delhi,  
New Delhi-7.
25. Dr. T. S. Subramanian,  
Director,  
Ahmedabad Textile Industries Research Association,  
Navrangpura,  
Ahmedabad-9.
26. Dr. Triguna Sen,  
Vice-Chancellor,  
Jadavpur University,  
Calcutta-32.
27. Dr. A. Ramaswami Mudaliar,  
India Steamship House,  
21, Old Court House Street,  
Calcutta-1.
28. Shri J. J. Ghandy,  
Resident Director,  
Tata Iron & Steel Co., Ltd.,  
Jamshedpur.
29. Shri S. L. Kirloskar,  
Chairman,  
Kirloskar Engineering Co., Poona  
and President, Federation of Indian Chamber of  
Commerce & Industry.
30. Shri P. A. Narielwala,  
Director,  
Tata Industries (P) Ltd., Bombay House,  
Bruce Street, Fort,  
Bombay-1.
31. Dr. K. A. Hamied,  
Chairman,  
CIPLA Laboratories,  
289, Bellasis Road, Byculia,  
Bombay-8.
32. Dr. Vikram A. Sarabhai,  
Director,  
Physical Research Laboratory,  
Navrangpura,  
Ahmedabad-9.
33. & Two members to be elected by the Board of Scientific  
34. and Industrial Research.
5. Dr. D. S. Kothari,  
Chairman,  
University Grants Commission,  
Bahadurshah Zafar Marg,  
New Delhi-1.
6. Dr. S. Bhagwantam,  
Scientific Adviser to the Minister of Defence,  
South Block,  
New Delhi-11.
7. Maj. Gen. I. R. Samson,  
Chief Controller,  
Research & Development Organisation,  
Ministry of Defence,  
South Block,  
New Delhi-11.
8. Shri P. C. Kapur,  
Director General,  
Technical Development,  
Udyog Bhavan,  
New Delhi-11.
9. Shri D. C. Baijal,  
Chairman,  
Railway Board,  
Rail Bhawan,  
New Delhi-1.
10. Dr. M. S. Randhawa,  
Director General,  
Intensive Agricultural Areas & Special Secretary to  
the Government of India,  
Ministry of Food & Agriculture,  
Department of Agriculture,  
Krishi Bhavan,  
New Delhi-1.
11. Dr. A. Nagaraja Rao,  
Adviser (Resources),  
Planning Commission,  
Yojana Bhavan,  
New Delhi-1.
12. Dr. B. P. Pal,  
Director,  
Indian Agricultural Research Institute,  
New Delhi-12.
13. Col. B. L. Taneja,  
Director,  
Indian Council of Medical Research,  
Ansari Nagar,  
New Delhi-16.
14. Dr. T. R. Govindachari,  
Director,  
CIBA Research Centre,  
Georegaon,  
Bombay-62.
15. Prof. B. D. Tilak,  
Department of Chemical Technology,  
Bombay University, Matunga,  
Bombay.
16. Dr. Satish Dhawan,  
Director,  
Indian Institute of Science,  
Bangalore-12.
17. Prof. Santi R. Palit,  
Professor of Physical Chemistry,  
Indian Association for the Cultivation of Science,  
Jadavpur University,  
Calcutta-32.
18. Shri B. V. Baliga,  
Managing Director,  
Bharat Electronics Ltd.,  
Jalahalli P.O.,  
Bangalore-13.
19. Dr. S. K. Mukherjee,  
General Manager,  
Rourkela Fertilizer Plant,  
Rourkela.

#### BOARD OF SCIENTIFIC & INDUSTRIAL RESEARCH

##### *President*

1. Prime Minister.

##### *Vice-President*

2. Minister of Education,  
Government of India,  
New Delhi-1

##### *Ex-Officio Member*

3. Director General,  
Scientific & Industrial Research.

##### *Members*

4. Dr. H. J. Bhabha, FRS,  
Secretary to the Government of India,  
Department of Atomic Energy,  
Apollo Pier Road,  
Bombay-1.

20. Dr. A. R. Kidwai,  
Professor and Head of the Department of Chemistry,  
Aligarh Muslim University,  
Aligarh.
21. Dr. Gurbaksh Singh,  
Professor and Head of the Department of Chemistry,  
Banaras Hindu University,  
Varanasi-5.
22. Prof. R. C. Mehrotra,  
Professor and Head of the Department of Chemistry,  
Rajasthan University,  
Jaipur.
23. Dr. M. S. Swaminathan,  
Head of the Department of Botany,  
Indian Agricultural Research Institute,  
Krishi Bhavan,  
New Delhi-1.
24. Dr. M. Narsinga Rao,  
Professor of Chemical Engineering,  
Indian Institute of Technology,  
Kharagpur.
25. Dr. A. Ramachandran,  
Professor of Mechanical Engineering,  
Indian Institute of Science,  
Bangalore-12.
26. Shri P. R. Ramakrishnan,  
Principal,  
Coimbatore Institute of Technology,  
Coimbatore, Aerodrome P.O.
27. Dr. Y. Nayudamma,  
Director, Central Leather Research Institute,  
Adyar,  
Madras-20.
28. Dr. B. R. Nijhawan,  
Director,  
National Metallurgical Laboratory,  
Jamshedpur.
29. Dr. A. R. Varma,  
Director (Designate),  
National Physical Laboratory,  
Hillside Road,  
New Delhi-12.
30. Dr. Amarjit Singh,  
Director,  
Central Electronics Engineering Research Institute,  
Pilani.
31. Shri K. Sreenivasan,  
Director, South India Textile Research Association,  
Coimbatore Aerodrome P.O.  
Coimbatore-14, (Madras State).
32. Shri Darbari S. Seth,  
General Manager,  
M/s. Tata Chemicals Ltd.,  
Mithapur, Okhamandal,  
W. Railway, (Gujarat State).
33. Prof. S. N. Bose,  
National Professor,  
22, Ishwar Mill Lane,  
Calcutta-6.
34. Prof. P. C. Mahalanobis, FRS,  
Member, Planning Commission,  
Yojana Bhavan,  
New Delhi-1.
35. Dr. T. S. Subramanian,  
Director,  
Ahmedabad Textile Industries Research Association,  
Navrangpura,  
Ahmedabad-9.
36. Dr. Triguna Sen,  
Vice-Chancellor,  
Jadavpur University,  
Calcutta-32.

## DEPARTMENT OF COMMUNICATIONS

## RESOLUTION

New Delhi, the 1st April 1965

No. 12-OC(46)/63.—The Government of India has signed along with a number of other countries, the agreement establishing interim arrangements for a Global Commercial Communications Satellite System and the Special Agreement thereunder. The Agreements envisage the establishment of a Global Commercial Communications Satellite System by the end of 1967. In order to ensure proper policy direction and technical planning of the scheme for India's participation in the Satellite System, the Government of India have decided to set up two inter-Departmental Committees, namely, the Policy Committee and the Technical Co-ordination Committee, with the following composition and functions :—

## 1. Policy Committee.

## Composition :

## Chairman

1. Secretary,  
Department of Communications.

## Members

2. Joint Secretary,  
Ministry of Finance,  
(Posts & Telegraphs).
3. Director,  
Physical Research Laboratory,  
Ahmedabad.
4. Director General,  
Overseas Communications Service,  
Bombay.
5. A representative of the Ministry of Finance,  
(Deptt. of Economic Affairs).
6. A representative of the Deptt. of Atomic Energy.
7. A representative of the Ministry of Defence.

The functions of the Policy Committee will be to ensure effective and timely implementation of the Scheme for India's participation in the Global Commercial Communications Satellite System and to advise Government, from time to time, on all important and policy matters connected with the scheme.

## 2. Technical Co-ordination Committee.

## Composition :

## Chairman

1. Director General, Overseas Communications Service.

## Members

2. Deputy Director General (Traffic),  
Overseas Communications Service,  
Bombay.
3. Chief Engineer,  
Overseas Communications Service,  
Bombay.
4. Wireless Adviser,  
Wireless Planning and Coordination,  
Deptt. of Communications.
5. Member (Telecommunication Development),  
Posts & Telegraphs Board.
6. Director,  
Telecommunication Research Centre,  
Posts & Telegraphs Department.
7. A representative of the Deptt. of Atomic Energy.
8. A representative of the Ministry of Defence.

The functions of the Technical Co-ordination Committee will be to work out all details regarding the establishment of a Satellite Communications Ground Station in India and to advise Government, from time to time, on all technical matters involved in the implementation of the Scheme.

## ORDER

ORDERED that a copy of the Resolution be communicated to all concerned.

ORDERED also that the Resolution be published in the Gazette of India for general information.

A. K. MUSTAFY, Jt. Secy., *Ex-Officio*.

L. C. JAIN, Secy.

**MINISTRY OF IRRIGATION AND POWER****RESOLUTION***New Delhi, the 7th April 1965*

No. 11/4/64-DW.I.—The following amendments are made in the Government of India, Ministry of Irrigation and Power, Resolution No. 25/11/60-DW.VI dated the 10th February, 1961, regarding the setting up of the Beas Control Board :—

*For*

"Secretary for the Project, Rajasthan" appearing in item (10) of paragraph 3 and item (4) of paragraph 6.

*Substitute*

"Secretary to the Government of Rajasthan, incharge of Colonisation Department".

**ORDER**

ORDERED that the above amendments be communicated to the Governments of Punjab, Rajasthan and Himachal Pradesh, the Ministries of the Government of India, Prime Minister's Secretariat, Cabinet Secretariat, Secretary to the President and the Planning Commission.

ORDERED also that the amendments be published in the Gazette of India and the State Governments concerned be requested to publish the same in the State Gazettes for general information.

V. NANJAPPA, Secy.

**MINISTRY OF LABOUR AND EMPLOYMENT****RESOLUTION***New Delhi the 3rd April 1965*

No. IVB-12(1)/64.—In pursuance of the recommendations made in para 25 of chapter XXVII of the Second Five Year Plan and in para 20 of chapter XV of the Third Five Year Plan, the Government of India have decided to set up a Wage Board for the Heavy Chemicals and Fertilizer industries. The composition of the Wage Board will be as follows :—

*Chairman*

Shri M. Spiramamurty.

*Independent Members*

(i) Shri P. R. Chakraverti, M.P.

(ii) Professor V. V. Ramanadham.

*Members Representing Employers*

(i) Shri D. P. Mathur.

(ii) One nominee of the Indians Chemicals Manufacturing Association, Bombay.

*Members Representing Workers*

(i) One nominee of the I.N.T.U.C.

(ii) One nominee of the A.I.T.U.C.

2. The following will be the terms of reference of the Board :—

(a) to determine the categories of employees (manual, clerical, supervisory, etc.) who should be brought within the scope of the proposed wage fixation;

(b) to work out a wage structure based on the principles of fair wages as set forth in the report of the Committee on Fair Wages;

*Explanation :* In evolving a wage structure, the Board should in addition to the considerations relating to fair wages, also take into account :—

(i) the needs of the Heavy Chemicals and Fertilizers industries in a developing economy;

(ii) the requirements of social justice;

(iii) the need for adjusting wage differentials in such a manner as to provide incentives to workers for advancing their skill; and

(iv) the desirability of extending the system of payment by results;

*Explanation :* In applying the system of payment by results the Board shall keep in view the need for fixing a minimum (fall-back wage) and also to safeguard against over work and undue speed.

3. The headquarters of the Board will be located at Madras. The correspondence intended for the Board shall be addressed to the Chairman, Central Wage Board for the Heavy Chemicals and Fertilizer industries, 'Lemon House', No. 5, Venkatarayana Road, T. Nagar, Madras-17.

**ORDER**

ORDERED that a copy of the Resolution be communicated to all concerned;

ORDERED also that the Resolution be published in the Gazette of India, for general information.

**RESOLUTION***New Delhi, the 3rd April 1965*

No. WB-3(26)/64.—The Central Wage Board for Coffee Plantation industry, set up by the Government of India by their Resolution No. WB-3(5)/61/1, dated the 7th July, 1961, has made recommendations for grant of second interim wage increase to the staff and non-staff categories of workmen in the coffee plantation industry, as shown in the Appendix.

2. The Wage Board has further recommended at its meeting held on the 1st March, 1965, that the above workers should continue to get the second interim wage increase at the same rates from 1st January 1965.

3. Government has decided to accept the Board's recommendations and to request the employers to implement the same as early as possible.

**ORDER**

ORDERED that a copy of the Resolution be communicated to all concerned.

ORDERED also that the Resolution be published in Gazette of India, for general information.

P. M. MENON, Secy.

**APPENDIX***Central Wage Board for Coffee Plantation Industry*

The Board has reached unanimous conclusions about the wages of the staff in Mysore, Madras and Kerala States and for employees known as excluded categories in Madras and Kerala States. Decisions remain to be taken on a few minor matters which will not take long. In the meanwhile the Wage Board Report is being drafted and is expected to be finalised soon. The Central Wage Board for Tea Plantation Industry has given a second interim wage increase to the workers as well as the staff in Tea Plantation Industry. This Board's recommendations about giving effect to the Board's decision about the wages of field staff and maistries in coffee plantations from 1-7-64 and 1-1-65 have already been accepted and notified by Government. Since the staff and non-staff categories in coffee plantation industry has received no wage increase since the granting of first interim wage increase by the Board, the Board considers that they should also get immediately a second interim wage increase. It is therefore recommended unanimously that :

(1) The staff employed on all coffee plantations in the States of Madras, Mysore and Kerala and the employees in the excluded categories employed on coffee plantations in the States of Madras and Kerala should be given a second interim wage increase with effect from 1st July 1964 to the end of December 1964 on the following basis :—

(a) Rs. 10 per month to those who draw total emoluments of Rs. 100 and below per month.

(b) Rs. 16 per month to those who draw total emoluments of above Rs. 100 per month but up to Rs. 200 per month.

(c) Rs. 22 per month to those who draw total emoluments of above Rs. 200 per month.

*Explanation :* "Total emoluments" shall mean the sum of basic pay, dearness allowance, servant allowance and first interim wage increase.

(2) A second interim wage increase should be given from 1-7-1964 to 31-12-1964 to non-staff categories like tractor drivers, vehicles drivers, mechanics etc., in Mysore State not covered by Board's recommendations dated 9-12-1964 and not covered by the above recommendations in clause (1) and to non-staff categories other than excluded categories in Madras and Kerala States at the following rates :—

(a) Rs. 7.50 per month for monthly rated workers,

(b) Rs. 0.20 per day for daily rated workers.

The Board's recommendations about the new wage structure for the staff and non-staff categories of employees effective from 1st January 1965 will be included in the Board's final report.

Sd/- L. P. Dave.

Sd/- U. K. Lakhman Gowda,

Sd/- M. B. Cariappa.

Sd/- M. C. Narasimhan.

Sd/- P. Vriddhagiri.

Sd/- N. Ahmed,

Secretary,

Bangalore.

Dated 2nd February, 1965.

## IMPORTANT

**In all communications addressed to the Secretary, Union Public Service Commission in respect of his application, the candidate should clearly state the name, month and year of the Examination, the Roll Number if communicated and his Name and address as given in the application.**

## UNION PUBLIC SERVICE COMMISSION

## NOTICE

New Delhi, the 17th April, 1965

No. F. 2/4/64-E.I.(B).—A combined competitive examination for recruitment to the following Services :—

- (i) The Indian Railway Service of Engineers,
- (ii) The Electrical Engineering Department of the Superior Revenue Establishment of Indian Railways,
- (iii) The Signal Engineering Department of the Superior Revenue Establishment of Indian Railways,
- (iv) The Mechanical Engineering and Transportation (Power) Department of the Superior Revenue Establishment of Indian Railways,
- (v) The Central Engineering Services, Class I and Class II,
- (vi) The Central Electrical Engineering Services, Class I and Class II,
- (vii) The Indian Supply Service, Class I,
- (viii) The Military Engineer Services, Class I (Buildings & Roads Cadre and Electrical & Mechanical Cadre),
- (ix) The Indian Ordnance Factories Service, Class I,
- (x) The Telegraph Engineering Service, Class I, and
- (xi) The Central Engineering Service (Roads), Class I,

will be held by the Union Public Service Commission at AHMEDABAD, ALAHABAD, BANGALORE, BHOPAL, BOMBAY, CALCUTTA, DELHI, HYDERABAD, JAIPUR, LONDON, MADRAS, PATIALA, PATNA, SHILLONG and TRIVANDRUM, commencing on 17th September, 1965, in accordance with the Rules published by the Ministry of Railways (Railway Board) in the Gazette of India dated 17th April, 1965. The centres and the date of commencement of the examination as mentioned above are liable to be changed at the discretion of the Commission. Candidates accepted for admission to the examination will be informed at what place, at what time and on what dates they should present themselves.

2. On the results of the examination, recruitment will also be made to the following posts (*see* Appendix IV to the Rules) on the basis of the scheme(s) of examination specified against each :—

Name of the post	Scheme of examination ( <i>vide</i> Appendix II to the Rules)
<b>MINISTRY OF RAILWAYS</b> ( <i>Railway Board</i> )	
(a) Class I posts in the Stores Department.	As for I.R.S.E./E.E.D./S.E.D./M. E. & T. (P) Dept.
<b>MINISTRY OF STEEL &amp; MINES</b> ( <i>Department of Mines &amp; Metals</i> )	
(b) Assistant Drilling Engineer, Class I, Geological Survey of India.	Please see N.B.I. below.
<b>MINISTRY OF IRRIGATION &amp; POWER</b> ( <i>Central Water &amp; Power Commission</i> )	
(c) Assistant Director/Assistant Executive Engineer/Research Officer—	
(i) Civil . . . . .	As for I.R.S.E./C.E.S., Class I
(ii) Electrical . . . . .	As for E. E. D.
(iii) Mechanical . . . . .	As for M. E. & T(P) Dept.
<b>P. &amp; T. WORKSHOPS ORGANISATION</b>	
(d) Assistant Manager, Cl. I.	As for I.O.F.S., Class I.
<b>P. &amp; T. CIVIL ENGINEERING WING</b>	
(e) Assistant Executive Engineer (Civil) Class I.	As for I.R.S.E./C.E.S., Class I.
(f) Assistant Executive Engineer (Elec.) Class I.	As for E.E.D./C.E.F.S., Class I. Please see N. B. II below.
(g) Assistant Engineer (Civil) Class II.	As for C. E. S., Class II.
(h) Assistant Engineer (Elec.) Class II.	As for C.E.E.S., Class II. Please see N. B. II below.

N.B. I.—For recruitment to posts at (b) above candidates who may have appeared at the examination with any of the scheme(s) of examination specified in Appendix II to the Rules may be considered, provided they possess a degree in Mechanical Engineering or an equivalent qualification.

N.B. II.—For recruitment to posts at (f) and (h) above candidates who may have appeared at the examination with scheme(s) of examination other than those specified against these posts may also be considered provided they possess a degree in Electrical Engineering or an equivalent qualification.

N.B. III.—Candidates desiring to be considered for any of the posts at (b), (f) and (h) above may indicate their preferences for these posts also in Column 25 of the application form.

3. Candidates who qualify in the Examination may also be considered for other permanent/temporary posts under the Central Government (*vide* para. 12 of Appendix IV to the Rules) requiring similar educational qualifications.

4. The approximate number of vacancies in the various Services/posts for which recruitment is to be made on the basis of this examination is given below :—

(i) The Indian Railway Service of Engineers . . . . .	12
(ii) The Electrical Engineering Department . . . . .	5
(iii) The Signal Engineering Department . . . . .	6
(iv) The Mechanical Engineering and Transportation (Power) Department . . . . .	3
(v) The Stores Department . . . . .	4
(vi) The Central Engineering Service, Class I . . . . .	8
(vii) The Central Engineering Service, Class II . . . . .	42
(viii) The Central Electrical Engineering Service, Class I . . . . .	1
(ix) The Central Electrical Engineering Service, Class II . . . . .	16
(x) The Indian Supply Service, Class I . . . . .	7
(xi) The Military Engineer Services, Class I (Buildings and Roads Cadre) . . . . .	4
(xii) The Military Engineer Services, Class I (Electrical and Mechanical Cadre) . . . . .	2
(xiii) The Indian Ordnance Factories Service, Class I . . . . .	50
(xiv) The Telegraph Engineering Service, Class I . . . . .	40
(xv) The Central Engineering Service (Roads), Class I . . . . .	2
(xvi) The post of Assistant Drilling Engineer, Class I in the Geological Survey of India . . . . .	*
(xvii) The post of Assistant Director/Assistant Executive Engineer/Research Officer in the Central Water and Power Commission . . . . .	75
(xviii) The post of Assistant Manager, Class I in the P. & T. Workshops Organisation . . . . .	2
(xix) The post of Assistant Executive Engineer, Class I in the P. & T. Civil Engineering Wing—	
(a) Civil . . . . .	10
(b) Electrical . . . . .	1
(xx) The post of Assistant Engineer, Class II in the P. & T. Civil Engineering Wing—	
(a) Civil . . . . .	15
(b) Electrical . . . . .	3

\*To be announced later.

The vacancies shown against the Services at items (i), (ii), (iii), (iv), (v), (vi), (viii), (xi), (xii) and (xiii) above are permanent.

The vacancies shown against the posts at items (xviii), (xix) and (xx) above are temporary but are likely to become permanent.

Of the 42 vacancies in the Central Class II, 11 vacancies are permanent and

Of the 16 vacancies in the Central Electrical Engineering Service, Class II, 5 vacancies are permanent and 11 are temporary.

All the 7 vacancies in the Indian Supply Service, Class I are temporary. Of these vacancies, 4 vacancies will be filled on the basis of Plan 1 and 3 on the basis of Plan 2 (See item I of para 2 of Appendix II to the Rules).

The vacancies in the Telegraph Engineering Service, Class I, are initially temporary but are likely to be retained on permanent basis.

The vacancies in the Central Engineering Service (Roads) Class I are temporary but are likely to continue indefinitely.

The break-up and nature of the vacancies in the posts of Assistant Director/Assistant Executive Engineer/Research Officer (Civil, Electrical and Mechanical) in the Central Water and Power Commission are as follows :—

- |                |  |
|----------------|--|
| (a) Civil      | 25 vacancies (5 permanent and 20 temporary). |
| (b) Electrical | 45 temporary vacancies.                      |
| (c) Mechanical | 5 temporary vacancies.                       |

The above numbers are liable to alteration.

Reservations will be made for candidates belonging to the Scheduled Castes and Scheduled Tribes in respect of vacancies as may be fixed by the Government of India.

Scheduled Castes/Tribes mean any of the Castes/Tribes mentioned in the Scheduled Castes/Tribes Lists (Modification) Order, 1956, read with the Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 1956, the Constitution (Jammu and Kashmir) Scheduled Castes Order, 1956, the Constitution (Andaman and Nicobar Islands) Scheduled Tribes Order, 1959, the Constitution (Dadra and Nagar Haveli) Scheduled Castes Order, 1962, the Constitution (Dadra and Nagar Haveli) Scheduled Tribes Order, 1962 and the Constitution (Pondicherry) Scheduled Castes Order, 1964.

5. A candidate may apply for admission to the examination in respect of all or any of the above Services/posts. He will be considered only for the Services/posts he applies for. If he wishes to be admitted as a candidate for more than one Service/post, he need send in only one application. He will be required to pay the fee mentioned in Annexure I only once, and will not be required to pay separate fee for each Service/post for which he applies.

N.B.—In their application forms, candidates are required to specify clearly the Service(s)/post(s), out of those mentioned above, for which they wish to be considered, in the order of preference. They may include in the order of preference, the category/categories of other Permanent/Temporary posts (*vide* paragraph 3 above) if they wish to be considered for appointment to those posts.

6. A candidate seeking admission to the examination must apply to the Union Public Service Commission, Dholpur House, New Delhi-11, on the prescribed form of application which must reach the Commission on or before the 7th June, 1965, accompanied with the necessary documents in accordance with the Instructions to Candidates contained in Annexure II. No application received after that date will be considered.

Applications from candidates residing abroad and those residing in the Andaman and Nicobar Islands will, however, be accepted up to the 21st June, 1965. (This is applicable to persons actually residing abroad or in the Andaman and Nicobar Islands at the time of submitting their applications).

7. Copies of application forms and full particulars are obtainable from the Secretary, Union Public Service Commission, Dholpur House, New Delhi-11, on payment of Re. 1.00, which should be remitted to the Commission by Money Order stating the name of the examination in respect of which the application forms are required. Postal Orders or cheques or currency notes will not be accepted in lieu of money orders. The forms, etc., can also be obtained on cash payment at the counter in the Commission's office. The amount of Re. 1.00 will in no case be refunded.

8. THE PRESCRIBED FEE (SEE ANNEXURE I) SHOULD BE PAID EITHER BY TREASURY RECEIPT OR BY INDIAN POSTAL ORDERS WITH THE APPLICATION. EACH POSTAL ORDER SHOULD INVARIABLY BE CROSSED AS SHOWN BELOW :



AND COMPLETED AS FOLLOWS :

"PAY TO THE SECRETARY, UNION PUBLIC SERVICE COMMISSION AT NEW DELHI POST OFFICE".

CANDIDATES MUST NOTE THAT IT IS NOT SAFE TO SEND POSTAL ORDERS WHICH ARE NEITHER CROSSED NOR MADE PAYABLE TO THE SECRETARY, UNION PUBLIC SERVICE COMMISSION AT NEW DELHI POST OFFICE. FULL PARTICULARS OF THE TREASURY RECEIPT OR POSTAL ORDERS, AS THE CASE MAY BE, SHOULD BE ENTERED AGAINST COLUMN 29 (a) OF THE APPLICATION FORM.

9. No allegation that an application form or a letter in respect of such a form has been lost or delayed in post will be considered, unless the person making such an allegation produces post office registration receipt. Candidates who send their applications, or requests for application forms at a late date, will do so at their own risk.

10. If any candidate who took the Engineering Services Examination held in September, 1964 wishes to apply for admission to this examination, he must submit his application by the prescribed date without waiting for the results or an offer of appointment. If he is appointed on the results of the 1964 examination, his candidature for this examination will be cancelled on request, and the fee refunded to him in full provided that such a request has been forwarded through the department in which he is actually appointed.

11. All communications in respect of an application, should be addressed to the Secretary, Union Public Service Commission, Dholpur House, New Delhi-11, and should contain the following particulars :—

- (i) NAME OF EXAMINATION.
- (ii) MONTH AND YEAR OF EXAMINATION.
- (iii) ROLL NUMBER (if communicated to candidate).
- (iv) NAME OF CANDIDATE.
- (v) ADDRESS AS GIVEN IN APPLICATION.

Communications not giving these particulars may not be attended to. In all correspondence with the Union Public Service Commission concerning this examination, candidates should invariably superscribe their envelopes and correspondence with the words "ENGINEERING SERVICES EXAMINATION, 1965".

AJOY BAGCHI,  
Deputy Secretary

#### ANNEXURE I FEE

Candidates seeking admission to the examination must pay the following fee to the Commission with the completed application form :

Rs. 82.50 Paise (Rs. 20.62 Paise in the case of candidates belonging to Scheduled Castes and Scheduled Tribes).

This amount should be paid by means of a Treasury Receipt or CROSSED Indian Postal Orders payable to the Secretary, Union Public Service Commission. The Commission will not accept payment made otherwise.

2. Once an application has been considered by the Commission and their decision admitting a candidate to the examination communicated to him, no claim from the candidate for a refund of the fee paid by him to the Commission will be entertained nor can this fee be held in reserve for any other examination or selection. If, however, a candidate is not admitted to the examination by the Commission, a refund of Rs. 75.00 (Rs. 18.75 Paise in the case of candidates belonging to Scheduled Castes and Scheduled Tribes) will be made to him.

3. The Commission may at their discretion remit the prescribed fee where they are satisfied that the applicant is a *bona fide* displaced person from East Pakistan and has migrated to India on or after January 1, 1964, and is not in a position to pay the prescribed fee.

#### ANNEXURE II

##### INSTRUCTIONS TO CANDIDATES

1. A copy each of the Notice, the Rules, the Application Form and other papers relating to the examination is obtainable from the office of the Union Public Service Commission in accordance with para. 7 of the Notice. Candidates should consult them carefully to see if they are eligible before filling in the application form or paying the prescribed fee. The conditions prescribed cannot be relaxed.

BEFORE SUBMITTING THE APPLICATION CANDIDATES MUST SELECT FINALLY FROM AMONG THE CENTRES GIVEN IN PARAGRAPH 1 OF THE NOTICE, THE PLACE AT WHICH THEY WISH TO APPEAR FOR THE EXAMINATION. ORDINARILY NO REQUEST FOR A CHANGE IN THE PLACE SELECTED WILL BE ENTERTAINED.

2. The application form must be filled in in the candidate's own handwriting and all answers should be given in words. It should be submitted direct to the Secretary, Union Public Service Commission, Dholpur House, New Delhi-11.

No application received by the Commission after the date prescribed in the Notice will be accepted.

A candidate already in Government Service, whether in a permanent or temporary capacity, must submit his application through the Head of his Department or office concerned who will complete the endorsement at the end of the application form and forward it to the Commission.

Applications from all other candidates, whether in private employment or in Government owned industrial undertakings or other similar organisations, can be entertained direct. If such a candidate forwards his application through his employer and it reaches the Union Public Service Commission late, the application, even if submitted to the employer, before the closing date, will not be entertained.

3. Candidates are warned that they should not furnish any particulars that are false or suppress any material information in filling in the application form.

4. A candidate must send the following documents with his application :—

- (i) Treasury Receipt or CROSSED Indian postal orders payable to the Secretary, Union Public Service Commission at New Delhi Post Office for the prescribed fee.
- (ii) CERTIFICATE OF AGE.
- (iii) CERTIFICATE OF CHARACTER.
- (iv) CERTIFICATE OF EDUCATIONAL QUALIFICATION.
- (v) TWO COPIES OF RECENT PASSPORT SIZE (5cm. × 7cm. approx.) PHOTOGRAPH OF THE CANDIDATE.
- (vi) IN THE CASE OF CANDIDATES OFFERING SURVEYING AS AN OPTIONAL OR COMPULSORY SUBJECT, A CERTIFICATE IN ORIGINAL WITH A COPY THEREOF, SHOWING THAT THE CANDIDATE HAS UNDERGONE SATISFACTORY TRAINING IN SURVEYING INCLUDING PRACTICAL SURVEYING (SEE SYLLABUS).

Details of the documents mentioned in items (i), (ii), (iii), (iv), (v) and (vi), are given below :—

(i) *Treasury Receipt or Crossed Indian Postal Orders for the prescribed fee.*—The amount may be deposited in the nearest Government Treasury, or in a branch of the State Bank of India, or in a State Treasury authorised to transact business on behalf of Government (Amount deposited at Bombay, Calcutta, Delhi or Madras should be deposited in the Reserve Bank of India instead of in the State Bank of India). The Treasury or Bank should be asked to credit it to the account head "XXI—Miscellaneous Department Examination fees. Receipts of the Union Public Service Commission." The name of the examination and of the treasury at which the fee is deposited should be clearly entered in the treasury receipt. The treasury receipt should be on the form pertaining to Central Government transactions and should be obtained from the treasury at which the fee is deposited. If, however, the blue form is not available in the treasury the ordinary form hitherto employed should be used.

All Postal Orders should bear the signature of the issuing Post Master and a clear stamp of the issuing Post Office. All Postal Orders should be CROSSED and filled in as follows :—

"Pay to the Secretary, Union Public Service Commission, at New Delhi Post Office."

In no case will Postal Orders payable at any other Post Office be accepted. Defaced or mutilated Postal Orders will also not be accepted.

**NOTE 1.**—Candidates residing abroad at the time of submitting their applications should deposit the amount of the prescribed fee (the equivalent of Rs. 82.50 Paise, Rs. 20.62 Paise in the case of candidates belonging to the Scheduled Castes and Scheduled Tribes) in the office of India's High Commissioner, Ambassador or Representative, as the case may be, in that country and forward the receipt from that office with the application.

**NOTE 2.**—AN APPLICATION NOT ACCOMPANIED BY A TREASURY RECEIPT OR CROSSED INDIAN POSTAL ORDERS FOR THE PRESCRIBED FEE WILL BE SUMMARILY REJECTED. THIS DOES NOT APPLY TO DISPLACED PERSONS FROM EAST PAKISTAN, WHO HAVE MIGRATED TO INDIA ON OR AFTER JANUARY 1, 1964 AND ARE SEEKING REMISSION OF THE PRESCRIBED FEE *vide* PARAGRAPH 3 OF ANNEXURE I.

**NOTE 3.**—A candidate must send the Treasury Receipt, in original, along with his application. Duplicate/triplicate copies of the Treasury Receipt will not be accepted.

(ii) *Certificate of age.*—The date of birth ordinarily accepted by the Commission is that entered in the Matriculation Certificate or in the Secondary School Leaving Certificate (or in a certificate recognised by an Indian University as equivalent to Matriculation) or in an extract from a Register of Matriculates maintained by a University, which extract must be certified by the proper authority of the University. The expression "Matriculation Certificate" in this part of the instructions must be understood as including these alternative certificates.

Candidates will thus understand that the Matriculation Certificate is required in all cases as evidence of age, and it must invariably be sent to the Commission, in original, with a copy thereof, together with the application.

Sometimes the Matriculation or equivalent Certificate does not show the date of birth, or only shows the age by completed years or completed years and months. In such cases a candidate must send, in addition to the Matriculation or equivalent certificate, an original certificate together with a copy thereof, from the Headmaster/Principal of the institution from where he passed the Matriculation or equivalent examination, showing the date of his birth or his exact age as recorded in the Admission Register of the Institution.

Candidates are warned that unless complete proof of age as laid down in these instructions is sent with an application, the application may be rejected. Further, they are warned

that if the date of birth stated in the application is inconsistent with the age shown in the Matriculation Certificate and no explanation is offered, the application may be rejected.

**NOTE 1.**—A candidate who holds a completed Secondary School Leaving Certificate need submit with the original a copy of only the page containing entries relating to age.

**NOTE 2.**—CANDIDATES SHOULD NOTE THAT ONCE A DATE OF BIRTH HAS BEEN CLAIMED AND ACCEPTED BY THE COMMISSION FOR THE PURPOSE OF ADMISSION TO AN EXAMINATION, NO CHANGE WILL ORDINARILY BE ALLOWED AT A SUBSEQUENT EXAMINATION.

**NOTE 3.**—Displaced persons, who have lost their original Matriculation Certificate in Pakistan should obtain duplicate certificate from the University concerned. If they are unable to obtain the duplicate Matriculation Certificate from the University, they should submit an extract from the University Gazette in which their results were published showing their date of birth and certified by the Registrar or the Headmaster.

(iii) *Certificate of character.*—A candidate must submit a certificate of character, in original, together with a copy thereof, from some person in authority (e.g. Principal, Proctor, Dean, etc.) at an educational institution which he is attending or has attended for at least one year during the three years immediately preceding the date of his application.

The signatory of the certificate should give his designation in full.

**NOTE 1.**—A candidate who has not attended any educational institution for at least one academic year within three years immediately preceding the date of his application may submit a certificate of character, in original, with a copy thereof, from a Gazetted Officer in service.

**NOTE 2.**—Only one certificate of character is required.

(iv) *Certificate of Educational Qualification.*—A candidate must submit a certificate or diploma, in original, with a copy thereof, showing that he has one of the qualifications prescribed in the Rules. The certificate submitted must be one issued by the authority (i.e., University or other examining body) awarding the particular qualification. If such a certificate or diploma is not submitted, the candidate must explain its absence, and submit such other evidence in original as he can to support his claim to the requisite qualifications. The Commission will consider this evidence on its merits but do not bind themselves to accept it as sufficient.

**NOTE.**—A candidate who has appeared at an examination the passing of which would render him eligible to appear at this examination, but has not been informed of the result, may apply for admission to the examination. A candidate who intends to appear at such a qualifying examination may also apply, provided that the qualifying examination is completed before the commencement of this examination. Such a candidate will be admitted to the examination, if otherwise eligible, but the admission would be deemed to be provisional and subject to cancellation if he does not produce proof of having passed the examination, as soon as possible, and in any case not later than two months after the commencement of this examination.

(v) *Photographs.*—A candidate must submit two passport size (5 cm. × 7 cm. approx.) copies of his recent photograph one of which should be pasted on the first page of the application form and the other copy should be firmly attached to the application form. Each copy of the photograph should be signed in ink on the front by the candidate.

(vi) *Certificate of Practical Training in Surveying.*—A candidate who takes Surveying as a subject must produce a certificate that he has undergone satisfactory training in surveying including practical surveying in a college or institution recognised by the Commission for the purpose of admission to the competitive examination for the Service. The training must be equivalent to that given in the full course for a degree or diploma in Civil Engineering. The certificate must be signed by the Principal or the Head of the Department of Surveying in the College or Institution.

In exceptional cases, the Commission may accept a Surveying certificate from any other institution, not recognised by them for the purpose of admission to the competitive examination for the Service, if they are satisfied that the practical training in Surveying imparted in that institution would meet the requirements of the Service, and their decision in the matter will be final.

#### THE FORM OF THE CERTIFICATE TO BE PRODUCED BY THE CANDIDATE

Certified that ..... who has been a student in this College/Institution has undergone in this College/Institution a practical course of training in Surveying equivalent to that given in the full course for a degree or diploma in Civil Engineering.

2. Certified also that this College is affiliated to the University of.....

Signature.....  
Name of College or Institution....

Date..... Where situated.....



*N.B.*—Candidates are warned that if an application is incompletely or wrongly filled in or is not accompanied by any one of the documents mentioned under 4(ii), 4(iii), 4(iv), 4(v) and 4(vi) above without a reasonable explanation for its absence having been given, the application is liable to be rejected and no appeal against its rejection will be entertained. The documents not submitted with the application should be sent soon after the submission of the application, and in any case they must reach the Commission's office except as provided for in Note under paragraph 4 (iv) above within one month after the last date for receipt of applications. Otherwise, the application is liable to be rejected.

Candidates are warned that they should in no case correct or alter or otherwise tamper with an entry in the documents submitted by them nor should they submit a tampered document. If there is any inaccuracy or any discrepancy between two or more such documents an explanation regarding the discrepancy may be submitted separately.

5. A candidate who claims to belong to one of the Scheduled Castes or Scheduled Tribes should submit in support of his claim a certificate, in original, in the form given below from the District Officer or the Sub-Divisional Officer or any other Officer of the district in which his parents (or surviving parent) ordinarily reside, who has been designated by the State Government concerned as competent to issue such certificate, if both his parents are dead, of the district in which he himself ordinarily resides otherwise than for the purpose of his own education.

A candidate from the Delhi State may submit such a certificate also from the Additional District Magistrate or the 1st Class Stipendiary Magistrate or the Revenue Assistant.

The form of the certificate to be produced by Scheduled Castes and Scheduled Tribes candidates applying for appointment to posts under the Government of India.

This is to certify that Shri\*

Shrimati			
Kumari			
son* of		of village*	
daughter		town	
District*		State*	
in		of the	of
Division		Union Territory	
belongs to the		Caste*	
		Tribe	which is
		Scheduled Caste*	
recognised as a		Scheduled Tribe	under
the Scheduled Castes and Scheduled Tribes Lists (Modification) Order, 1956*			
the Constitution (Jammu and Kashmir) Scheduled Castes Order, 1956*			
the Constitution (Andaman and Nicobar Islands) Scheduled Tribes Order, 1959*			
the Constitution (Dadra and Nagar Haveli) Scheduled Castes Order, 1962*			
the Constitution (Dadra and Nagar Haveli) Scheduled Tribes Order, 1962*			
Constitution (Pondicherry) Scheduled Castes Order, 1964*.			
Shri*	and*	his*	
2. Shrimati	or	her	family ordinarily
Kumari			
village*			District*
reside(s) in		of	
town			Division
State*			
of the		of	
Union Territory			
		Signature.....	
		**Designation.....	
		(with seal of office)	
Place.....	State*		
	Union Territory		
Date.....			

\*Please delete the words which are not applicable.

NOTE.—The term "ordinarily reside(s)" used here will have the same meaning as in Section 20 of the Representation of the Peoples Act, 1950.

\*\*Officers competent to issue Caste/Tribe certificates.

1. District Magistrate/Additional District Magistrate/Collector/Deputy Commissioner/Additional Deputy Commissioner/Deputy Collector/1st Class Stipendiary Magistrate/†Sub-Divisional Magistrate/Taluka Magistrate/Executive Magistrate/Extra Assistant Commissioner.

†(Not below the rank of 1st Class Stipendiary Magistrate).

2. Chief Presidency Magistrate/Additional Chief Presidency Magistrate/Presidency Magistrate.

3. Revenue Officers not below the rank of Tehsildar.

4. Sub-Divisional Officer of the area where the candidate and/or his family normally resides.

5. Administrator/Secretary to Administrator/Development Officer (Laccadive Minicoy and Amindivi Islands).

6. (i) A displaced person from East Pakistan seeking remission of the prescribed fee under paragraph 3 of Annexure I to the Notice should produce a certificate, in original, together with a copy thereof, from the Camp Commandant of the Transit Centres of the Dandakaranya Project, or the Camp Commandant of the Relief Camps, or the District Magistrate of the area in which he may, for the time being, be resident, to show that he is a *bona fide* displaced person from East Pakistan and has migrated to India on or after January 1, 1964. He should also produce a certificate, in original, from a District Officer or a Gazetted Officer of Government or a Member of the Parliament or State Legislature to show that he is not in a position to pay the prescribed fee.

(ii) A displaced person from East Pakistan claiming age concession under paragraph 5(e)(ii) or 5(e)(iii) of the Rules should produce a certificate, in original, together with a copy thereof, from the Camp Commandant of the Transit Centres of the Dandakaranya Project, or the Camp Commandant of the Relief Camps, or the District Magistrate of the area in which he may, for the time being, be resident, to show that he is a *bona fide* displaced person from East Pakistan and has migrated to India on or after January 1, 1964.

(iii) A candidate from the Union Territory of Pondicherry claiming age concession under para. 5(e)(iv) of the Rules should produce, in original, together with a copy thereof, a certificate from the Principal of the College he has graduated/will graduate from to show that he has been receiving education through the medium of French or has, at some stage, received education through the medium of French.

(iv) A candidate from the Andaman and Nicobar Islands claiming age concession under paragraph 5(e)(v) of the Rules should produce a certificate, in original, together with a copy thereof, from one of the following authorities in support of his claim.—

(i) Chief Commissioner.

(ii) Deputy Commissioner.

(iii) Additional Deputy Commissioner.

(iv) Additional District Magistrate.

(v) Any one of the Assistant Commissioners.

(v) A candidate claiming age concession as a repatriate from Ceylon under paragraph 5(e)(vi) of the Rules should produce, in original, a certificate from the High Commission for India in Ceylon stating that he is an Indian Citizen who has come to India under the Repatriation Scheme of the Government of Ceylon.

(vi) A candidate from the Union Territory of Goa, Daman and Diu claiming age concession under paragraph 5(e)(vii) of the Rules should produce a certificate, in original, together with a copy thereof from one of the following authorities in support of his claim :—

(1) Director of Civil Administration.

(2) Administrators of the Concelhos.

(vii) A candidate who has migrated from Kenya, Uganda and the United Republic of Tanzania (formerly Tanganyika and Zanzibar) claiming age concession under paragraph 5(e)(viii) of the Rules should produce a certificate, in original, together with a copy thereof, from the District Magistrate of the area in which he may, for the time being, be resident, to show that he is a *bona fide* migrant from the countries mentioned above.

7. (a) A person in whose case a certificate of eligibility is required should apply to the Government of India, Ministry of Railways/Works and Housing/Defence/Industry and Supply/Transport/Department of Communications, for issue of the required certificate of eligibility in his favour.

(b) If a certificate of eligibility is not necessary in the case of a person, he should produce an affidavit sworn before a first class Magistrate in one of the following forms, whichever may be applicable to him :—

1. "I declare that I migrated to India from areas which now form Pakistan before the nineteenth day of July, 1948, and have ordinarily been resident in India since then."

2. "I declare that I migrated to India from areas which now form Pakistan on or after the nineteenth day of July, 1948, and have ordinarily been resident in India since then, and I further declare that I have got myself registered as a citizen of India under Article 6 of the Constitution."

3. "I declare that I entered the Union Services without a certificate of eligibility before the commencement of the Constitution i.e., 26th January, 1950, and am continuing in such service since then without a break."



**NOTE.**—A candidate whose case is covered by item 2 above may submit the certificate of Registration as citizen of India in original, along with a copy thereof, in lieu of an Affidavit sworn before a first class Magistrate as required under sub-para (b) above.

8. THE CERTIFICATES MENTIONED IN PARAGRAPHS 4(ii), 4(iii), 4(iv), 4(vi), 5, 6 and 7(b) ABOVE SHOULD INVARIABLY BE SENT IN ORIGINAL. THE COMMISSION DO NOT ACCEPT ONLY COPIES OF THESE CERTIFICATES, WHETHER ATTESTED OR OTHERWISE.

The originals of the certificates forwarded in accordance with paragraphs 4(ii), 4(iii), 4(iv), 4(vi), 5, 6, and 7(b) above will be returned when the result of the application is communicated. CANDIDATES ARE ADVISED TO KEEP ATTESTED COPIES OF THEIR CERTIFICATES BEFORE SUBMITTING THEM TO THE COMMISSION. THE COMMISSION CANNOT RETURN THE CERTIFICATE EARLIER THAN THE DATE OF COMMUNICATION OF THE RESULT OF THE APPLICATION FOR WHATEVER PURPOSE THEY MAY BE REQUIRED, NOR CAN THEY SUPPLY ATTESTED COPIES.

If a candidate has already submitted the certificates required in paragraphs 4(ii), 4(iii), 4(iv), 4(vi), 5, 6 and 7(b) above in connection with another examination conducted by the Union Public Service Commission and if they have not yet been returned to him, he should mention the fact when submitting his application, and if possible enclose a copy of each certificate. If the certificates are not with the Commission they should be sent with the application, irrespective of whether the candidate appeared at a previous examination conducted by the Commission or not. If a certificate cannot be submitted with the application a reasonable explanation for its absence must be given with the application.

9. The fact that an application form has been supplied on a certain date, will not be accepted as an excuse for the late submission of an application. The supply of an application form does not *ipso facto* make the receiver eligible for admission to the examination.

10. If a candidate does not receive an acknowledgement of his application within a fortnight from the last date of receipt of applications for the examination he should at once contact the Commission for the acknowledgement.

11. Every candidate for admission to this examination will be informed, at the earliest possible date, of the result of his application. It is not, however, possible to say when the result will be communicated. But if a candidate does not receive from the Union Public Service Commission a communication regarding the result of his application one month before the commencement of the examination, he should at once contact the Commission for the result. Failure to comply with this provision will deprive the candidate of any claim to consideration.

All returnable certificates or papers will be returned when the result of his application is communicated.

12. No candidate shall be admitted to the examination, unless he holds a certificate of admission from the Commission.

13. Candidates must pay the fee prescribed in Annexure I to the Notice. No claim for a refund of the fee will be entertained except to the extent stated in that Annexure nor can the fee be held in reserve for any other examination or selection.

14. All candidates who are declared qualified for the Personality Test will be physically examined at the place where they are summoned for interview, either immediately before or after the interview. Candidates will have to pay a fee of Rs. 16.00 to the Medical Board. The fact that a candidate has been physically examined will not mean or imply that he will be considered for appointment. Candidates are advised to consult a Government Medical Officer of the standing of a Civil Surgeon as to their physical fitness before entering for the examination. Particulars of the nature of the medical test to which candidates will be subjected before appointment and of the standards required are given in Appendix III. These regulations are published for the convenience of candidates and in order to enable them to ascertain the probability of their coming up to the required physical standard but they are not intended to restrict the discretion of Medical Examiners in any way.

15. Copies of pamphlets containing rules and question papers of the examinations held in previous years are on sale with the Manager of Publications, Civil Lines, Delhi-6, and may be obtained from him direct by mail orders only. These can also be obtained against cash payment from (i) the Kitab Mahal, Theatre Communication Building, Connaught Place, New Delhi and (ii) the Government of India Book Depot, 8-Hastings Street, Calcutta. The pamphlets are also obtainable from the agents for the Government of India publications at various mofussil towns.

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16. *Communications regarding applications.*—ALL COMMUNICATIONS IN RESPECT OF AN APPLICATION SHOULD BE ADDRESSED TO THE SECRETARY, UNION PUBLIC SERVICE COMMISSION, DHOLPUR HOUSE, NEW DELHI-11 AND SHOULD INVARIABLY CONTAIN THE FOLLOWING PARTICULARS :—

- (i) NAME OF EXAMINATION.
- (ii) MONTH AND YEAR OF EXAMINATION.
- (iii) ROLL NUMBER (if communicated to candidate).
- (iv) NAME OF CANDIDATE (IN BLOCK CAPITALS).
- (v) ADDRESS AS GIVEN IN APPLICATION.

N.B.—COMMUNICATIONS NOT GIVING THE ABOVE PARTICULARS MAY NOT BE ATTENDED TO.

17. *Change in address.*—A CANDIDATE MUST SEE THAT COMMUNICATIONS SENT TO HIM AT THE ADDRESS STATED IN HIS APPLICATION ARE REDIRECTED, IF NECESSARY. CHANGE IN ADDRESS SHOULD BE COMMUNICATED TO THE COMMISSION AT THE EARLIEST OPPORTUNITY GIVING THE PARTICULARS MENTIONED IN PARAGRAPH 16 ABOVE. ALTHOUGH THE COMMISSION MAKE EVERY EFFORT TO TAKE ACCOUNT OF SUCH CHANGES THEY CANNOT ACCEPT ANY RESPONSIBILITY IN THE MATTER.

## MINISTRY OF RAILWAYS

(Railway Board)

### RULES

New Delhi, the 17th April, 1965

No. L(GR)/I-65RR2.—The rules for a competitive examination to be held by the Union Public Service Commission in September, 1965, for the purpose of filling vacancies in the following Services are, with the concurrence of the Ministries/Departments concerned, published for general information.

- (i) Indian Railway Service of Engineers;
- (ii) Electrical Engineering Department of the Superior Revenue Establishment of Indian Railways;
- (iii) Signal Engineering Department of the Superior Revenue Establishment of Indian Railways;
- (iv) Mechanical Engineering & Transportation (Power) Department of the Superior Revenue Establishment of Indian Railways;
- (v) Central Engineering Service, Class I;
- (vi) Central Engineering Service, Class II;
- (vii) Central Electrical Engineering Service, Class I;
- (viii) Central Electrical Engineering Service, Class II;
- (ix) Indian Supply Service, Class I;
- (x) The Military Engineer Services, Class I, (Buildings and Roads Cadre);
- (xi) The Military Engineer Services, Class I, (Electrical and Mechanical Cadre);
- (xii) Indian Ordnance Factories Service, Class I;
- (xiii) Telegraph Engineering Service, Class I; and
- (xiv) Central Engineering Service (Roads), Class I.

2. A candidate must apply to be admitted to the examination before such date, in such manner and in such form as the Commission may prescribe.

3. A candidate must be either :—

- (a) a citizen of India, or
- (b) a subject of Sikkim, or
- (c) a subject of Nepal, or
- (d) a subject of Bhutan, or
- (e) a Tibetan refugee who came over to India, before 1st January, 1962, with the intention of permanently settling in India, or
- (f) a person of Indian origin who has migrated from Pakistan with the intention of permanently settling in India;

Provided that a candidate belonging to category (c), (d), (e) and (f) above shall be a person in whose favour a certificate of eligibility has been granted by the Government and if he belongs to category (f) the certificate of eligibility will be valid only for a period of one year from the date of his appointment, beyond which such a candidate will be retained in service subject to his having acquired Indian Citizenship.

Certificate of eligibility will not, however, be necessary in the case of candidates belonging to any one of the following categories :—

- (i) Persons who migrated to India from Pakistan before the nineteenth day of July, 1948, and have ordinarily been residing in India since then.

- (ii) Persons who migrated to India from Pakistan on or after the nineteenth day of July, 1948, and have got themselves registered as citizens of India under Article 6 of the Constitution.
- (iii) Non-citizens in category (f) above who entered service under the Government of India before the commencement of the Constitution, viz., 26th January, 1950, and who have continued in such service since then without a break. Any such person who re-entered or may re-enter such service with break after the 26th January, 1950, will, however, require certificate of eligibility in the usual way.

A candidate in whose case a certificate of eligibility is necessary may be admitted to the examination and he may also be provisionally appointed subject to the necessary certificate being granted in his favour by the Government.

4. (a) No male candidate who has more than one wife living or who, having a spouse living, marries in any case in which such marriage is void by reason of its taking place during the lifetime of such spouse, shall be eligible for appointment to any of the Services, appointments to which are made on the results of this competitive examination, unless the Government of India, after being satisfied that there are special grounds for doing so, exempt any male candidate from the operation of this rule.

(b) No female candidate whose marriage is void by reason of the husband having a wife living at the time of such marriage or who has married a person who has a wife living at the time of such marriage shall be eligible for appointment to any of the Services, appointments to which are made on the results of this competitive examination, unless the Government of India, after being satisfied that there are special grounds for doing so, exempt any female candidate from the operation of this rule.

5. (a) A candidate for this examination must have attained the age of 20 years and must not have attained the age of 25 years on the 1st August, 1965, i.e., he must have been born not earlier than the 2nd August, 1940 and not later than the 1st August, 1945.

(b) The upper age-limit of 25 years will be relaxable up to 30 years in the case of the Government servants of the following categories applying for Services other than the Telegraph Engineering Service, Class I, Indian Ordnance Factories Service, Class I and the Central Engineering Service (Roads), Class I, if they are employed in a Department/Office under the control of any of the authorities mentioned in column 1 below and apply for admission to the examination for the corresponding service mentioned in column 2.

- (i) A candidate who holds substantively a permanent post in the particular Department/Office concerned. This relaxation will not be admissible to a probationer appointed against a permanent post in the Department/Office during the period of his probation.
- (ii) A candidate who has been continuously in a temporary service in the particular Department/Office for at least 3 years on the 1st August, 1965.
- (iii) A temporary Assistant Engineer recruited through the Commission to the Civil, Electrical, Signal and Mechanical and Transportation (Power) Departments of Indian Railways will also be eligible for this concession irrespective of the length of his service in the Department.

Column 1	Column 2
Railway Department	I.R.S.E. E.E.D. S.E.D. M.E. & T.P. Department
Central Public Works Department.	C.E.S., Class I C.E.S., Class II C.E.E.S., Class I C.E.E.S., Class II
Directorate General of Supplies and Disposals.	I.S.S., Class I
Engineer-in-Chief, Army Headquarters.	M.E.S., Class I (B. & R. Cadre) M.E.S., Class I (E. & M. Cadre)

NOTE—The period of apprenticeship, if followed by appointment against a working post on the Railways, may be treated as Railway Service for the purpose of age concession.

(c) The upper age-limit of 25 years will be relaxable up to 30 years also in respect of candidates for the Telegraph Engineering Service, Class I, in the case of the following:—

(i) A candidate who holds substantively a permanent post in the Posts and Telegraphs Department. This relaxation will not be admissible to a probationer appointed against a permanent post in the Department during the period of his probation.

(ii) A candidate who has continuously held for a period of not less than 2 years on the 1st August, 1965, any of the following temporary posts under the Posts and Telegraphs Department.

1. Repeater Station Assistants.
2. Foreman or Assistant Foreman Telegraph Workshops.
3. Temporary Assistant Engineers Workshops.
4. Engineering Supervisors.
5. Workshop Supervisors.

(d) The upper age-limit of 25 years will likewise be relaxable up to 30 years in respect of candidates for the Indian Ordnance Factories Service, Class I who hold substantively permanent appointments at the Ordnance Factories. This relaxation will not be admissible to a probationer appointed against a permanent post in the Ordnance Factories during the period of his probation.

PROVIDED THAT NO CANDIDATE SHALL BE PERMITTED, UNDER THE RELAXATION(S) OF THE UPPER AGE-LIMIT MENTIONED AT (b), (c) AND (d) ABOVE, TO COMPETE MORE THAN THREE TIMES AT THE EXAMINATION.

(e) The upper age-limit prescribed above will be further relaxable:—

- (i) Up to a maximum of five years if a candidate belongs to a Scheduled Caste or a Scheduled Tribe.
- (ii) Up to a maximum of three years, if a candidate is a *bona fide* displaced person from East Pakistan and has migrated to India on or after January 1, 1964;
- (iii) Up to a maximum of eight years, if a candidate belongs to a Scheduled Caste or a Scheduled Tribe and is also a *bona fide* displaced person from East Pakistan and has migrated to India on or after January 1, 1964;
- (iv) Up to a maximum of three years if a candidate is a resident of the Union Territory of Pondicherry and has received education through the medium of French at one stage or another;
- (v) Up to a maximum of four years if a candidate belongs to the Andaman and Nicobar Islands;
- (vi) Up to a maximum of three years if a candidate is an Indian citizen and is a repatriate from Ceylon;
- (vii) Up to a maximum of three years if a candidate is a resident of the Union Territory of Goa, Daman and Diu; and
- (viii) Up to a maximum of three years if a candidate is of Indian origin and has migrated from Kenya, Uganda and the United Republic of Tanzania (formerly Tanganyika and Zanzibar).

N.B. (i).—For the purposes of this Rule, a candidate shall be deemed to have competed at the examination once for all the Services/posts ordinarily covered by the examination if he competes for any one or more of the Services/posts.

A candidate shall be deemed to have competed at the examination if he actually appears in any one or more subjects.

N.B. (ii).—The candidature of a person who is admitted to the examination under the age concession mentioned in Rule 5(b), 5(c) and 5(d) above is liable to be cancelled, if, after submitting his application, he resigns from service or his services are terminated by his department/office, either before or after taking the examination. He will, however, continue to be eligible, if he is retrenched from the Service or post after submitting his application.

A candidate who, after submitting his application to his department, is transferred to other department/office, will be eligible to compete under departmental age concession for the service, for which he would have been eligible, but for his transfer, provided his application has been forwarded by his parent department.

SAVE AS PROVIDED ABOVE THE AGE-LIMITS PRESCRIBED CAN IN NO CASE BE RELAXED.

6. A candidate already in Government Service, whether in a permanent or a temporary capacity, must obtain prior permission of the Head of the Department to appear for the examination.

7. A candidate must have—

- (a) obtained a degree in Engineering from a university incorporated by an Act of the Central or State Legislature in India or other educational Institutes established by an Act of Parliament, or declared to be deemed as Universities under Section 3 of the University Grants Commission Act, 1956; or
- (b) Passed Sections A and B of the Associate Membership Examination of the Institution of Engineers (India), or have any other educational qualifications recognised by that institution as exempting from passing these Sections; or
- (c) obtained an Engineering degree of one of the Universities mentioned in Appendix I under the conditions prescribed in that Appendix; or

- (d) passed the Honours Diploma Examination in Civil, Mechanical or Electrical Engineering of the Loughborough College, Leicestershire provided the candidate has passed the common preliminary examination or has been exempted therefrom; or
- (e) passed the Graduate Membership Examination of the Institution of Tele-communication Engineers (India); or
- (f) passed the Graduate Membership Examination of the Institution of Electronics and Radio Engineers, London, held after November, 1959.

The Graduate Membership Examination of the Institution of Electronics and Radio Engineers, London, held prior to November, 1959 is also acceptable subject to the following conditions :—

- (1) that the candidates who have passed the examination held prior to November, 1959, should have appeared and passed in the following additional subjects :
  - (i) Principles and Applications of Electrical Engineering (in accordance with the syllabus prescribed in Section A of Post—1959 Scheme),
  - (ii) Mathematics II (in accordance with the syllabus prescribed in Section B of Post—1959 Scheme).
- (2) that the candidates concerned should produce a certificate from the Institution of Electronics and Radio Engineers, London, in fulfilment of the condition prescribed at (1) above.

NOTE 1.—Qualifications (e) and (f) will be applicable only to those candidates who are competing for Signal Engineering Department, Electrical Engineering Department and Mechanical Engineering and Transportation (Power) Department of the Superior Revenue Establishment of Indian Railways, the Telegraph Engineering Service, Class I, the Central Electrical Engineering Services, Class I and Class II and the Military Engineer Services, Class I (Electrical and Mechanical Cadre).

NOTE 2.—In exceptional cases, the Commission may treat a candidate, who has not any of the qualifications prescribed in this rule, as educationally qualified provided that he has passed examinations conducted by other institutions, the standard of which in the opinion of the Commission, justifies his admission to the examination.

NOTE 3.—A candidate who has appeared at an examination the passing of which would render him eligible to appear at this examination, but has not been informed of the result, may apply for admission to the examination. A candidate who intends to appear at such a qualifying examination may also apply, provided that the qualifying examination is completed before the commencement of this examination. Such a candidate will be admitted to the examination, if otherwise eligible, but the admission would be deemed to be provisional and subject to cancellation if he does not produce proof of having passed the examination, as soon as possible, and in any case not later than two months after the commencement of this examination.

NOTE 4.—Candidates who are otherwise qualified but who have taken degrees from Foreign Universities which are not included in Appendix I, may also apply to the Commission and may be admitted to the examination at the discretion of the Commission.

8. The decision of the Commission as to the eligibility or otherwise of a candidate for admission to the examination shall be final.

No candidate shall be admitted to the examination unless he holds a certificate of admission from the commission.

9. A candidate who is or has been declared by the Commission guilty of impersonation or of submitting fabricated documents or documents which have been tampered with or of making statements which are incorrect or false or of suppressing material information or otherwise resorting to any other irregular or improper means for obtaining admission to the examination, or of using or attempting to use unfair means in the examination hall or of misbehaviour in the examination hall, may, in addition to rendering himself liable to criminal prosecution,—

- (a) be debarred permanently or for a specified period :—
  - (i) by the Commission, from admission to any examination or appearance at any interview held by the Commission for selection of candidates; and
  - (ii) by the Government from employment under them;
- (b) be liable to disciplinary action under the appropriate rules, if he is already in service under Government.

10. Any attempt on the part of a candidate to obtain support for his candidature by any means may disqualify him for admission.

11. The examination under these rules shall be conducted by the Commission in the manner prescribed in the regulations which form Appendix II to these rules.

12. Candidates must pay the fee prescribed in Annexure I to the Commission's Notice. No claim for a refund of the fee will be entertained except to the extent stated in that Annexure, nor can the fee be held in reserve for any other examination or selection.

13. Candidates who obtain such minimum qualifying marks in the written examination as may be fixed by the Commission in their discretion shall be summoned by them for an interview for a personality test.

After the examination, the candidates will be arranged by the Commission in the order of merit as disclosed by the aggregate marks finally awarded to each candidate; and in that order so many candidates as are found by the Commission in their discretion to be qualified by the examination shall be recommended for appointment up to the number of unreserved vacancies decided to be filled on the results of the examination.

Provided that any candidate belonging to the Scheduled Castes or the Scheduled Tribes who though not qualified by the standard prescribed by the Commission for any service, is declared by them to be suitable for appointment thereto with due regard to maintenance of efficiency of administration, shall be recommended for appointment to vacancies reserved for members of the Scheduled Castes and the Scheduled Tribes, as the case may be, in that service.

14. Success in the examination confers no right to appointment, unless Government are satisfied, after such an enquiry as may be considered necessary that the candidate is suitable in all respects for appointment to the public service.

Due consideration will be given to the preferences expressed by a candidate at the time of his application, but the Government of India reserve the right to assign him to any Service/post for which he is a candidate.

NOTE.—The form and manner of communication of the result of the examination to individual candidates shall be decided by the Commission in their discretion.

15. A candidate must be in good mental and bodily health and free from any physical defect likely to interfere with the discharge of his duties as an officer of the service. A candidate who (after such physical examination as Government or the appointing authority, as the case may be, may prescribe) is found not to satisfy those requirements will not be appointed. All candidates who are declared qualified for the Personality Test will be physically examined at the place where they are summoned for interview, either immediately before or after the interview. Candidates will have to pay a fee of Rs. 16.00 to the Medical Board. The fact that a candidate has been physically examined will not mean or imply that he will be considered for appointment.

In order to prevent disappointment candidates are advised to have themselves examined by a Government Medical Officer of the standing of a Civil Surgeon, before applying for admission to the examination. Particulars of the nature of the medical test to which candidates will be subjected before appointment and of the standards required are given in Appendix III.

P. C. MATHEW, Secy.

#### APPENDIX I

List of University degrees which will be recognised for admission to the examination [vide para 7(c) of the Rules.]

Aberdeen.—B.Sc. Engineering (Honours or Ordinary degree).

Cambridge.—Ordinary B.A. degree in engineering provided the graduate has passed in the principal subjects, Engineering I, Engineering II, and Engineering III.

Durham.—B.Sc. in Marine Engineering.

Glasgow.—B.Sc. in Naval Architecture (Honours or Ordinary degree).

NOTE.—The above degrees will be accepted only if taken after three years' study and passing the regular examinations in the several Universities. The conditions as to three years study will not, however, apply to Indians who, having taken an Indian degree which exempts them from part of the University course, shall have taken one of the above degrees in less than three years in accordance with the regulations of the University concerned.

#### APPENDIX II

1. The examination shall be conducted according to the following plan :—

#### PART I

Compulsory and Optional papers as noted below against each Service. The duration of each of the papers except 'General Knowledge' will be of 3 hours. The duration of the paper 'General Knowledge' will be of 2 hours.

## PART II

Personality test for such candidates as may be called by the Commission carrying a maximum of 300 marks.

2. The following will be the subjects for the written examination :—

Subjects	Maximum Marks
<b>A. Indian Railway Service of Engineers—</b>	
<i>(a) Compulsory—</i>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200
(4) Construction :	
Paper I—	100
(i) Building Materials and Building Construction	200
(ii) Design of Structures	
Paper II—	100
Roads, Railways (General Principles governing the design of Railways, Roads, Harbours and other works).	200
(5) Surveying	
(6) Sanitary Engineering and Water Supply	100
TOTAL	800
<i>(b) Optional—</i>	
Any two of the following subjects :—	
(1) Prime Movers	100
(2) Hydraulics and Hydraulic Machines	100
(3) Electrical Engineering	100
(4) Architecture and Town Planning	100
(5) Mechanical Engineering	100
<b>B. Electrical Engineering Department—</b>	
<i>(a) Compulsory—</i>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Electrical Engineering	200
(4) Mechanical Engineering	200
(5) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200
TOTAL	800
<i>(b) Optional—</i>	
Any two of the following subjects :—	
(1) Physics (including Electricity and Magnetism)	100
(2) Applied Mathematics	100
(3) Surveying	100
(4) Electrical Communication Engineering	100
(5) Workshop Organisation and Management	100
<b>C. Signal Engineering Department—</b>	
<i>(a) Compulsory—</i>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Electrical Engineering	200
(4) Electrical Communication Engineering	200
(5) Mechanical Engineering	200
TOTAL	800
<i>(b) Optional—</i>	
Any two of the following subjects :—	
(1) Physics (including Electricity and Magnetism)	100
(2) Applied Mechanics (as under item 5 under Schedule to Appendix II)	100
(3) Applied Mathematics	100
(4) Construction :	
Paper I—	50
(i) Building Materials and Building Construction	100
(ii) Design of Structures	
Paper II—	50
Roads, Railways (General Principles governing design of Railways, Roads, Harbours and other works).	100
(5) Workshop Organisation and Management	
(6) Applied Electronic Circuits	100

Subjects	Maximum Marks
<b>D. Mechanical Engineering and Transportation (Power) Department of the Superior Revenue Establishment of Indian Railways—</b>	
<i>(a) Compulsory—</i>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Applied Mechanics (as under item 5 under Schedule to Appendix II)	200
(4) Theory of Machines and Machine Design	200
(5) Prime Movers	200
TOTAL	800
<i>(b) Optional—</i>	
Any two of the following subjects :—	
(1) Hydraulics and Hydraulic Machines	100
(2) Electrical Engineering	100
(3) Metallurgy	100
(4) Workshop Technology	100
(5) Physics (including Electricity and Magnetism)	100
(6) Workshop Organisation and Management	100
<b>E. &amp; F. Central Engineering Services, Class I and Class II—</b>	
<i>(a) Compulsory—</i>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200
(4) Construction :	
Paper I—	100
(i) Building Materials and Building Construction	200
(ii) Design of Structures	
Paper II—	100
Roads, Railways (General Principles governing the design of Railways Roads, Harbours and other works).	100
(5) Surveying	
(6) Sanitary Engineering and Water Supply	100
TOTAL	800
<i>(b) Optional—</i>	
Any two of the following subjects :—	
(1) Prime Movers	100
(2) Hydraulics and Hydraulic Machines	100
(3) Electrical Engineering	100
(4) Mechanical Engineering	100
(5) Architecture and Town Planning (For C. E. S. Class I only)	100
<b>G. &amp; H. Central Electrical Engineering Services, Class I and Class II—</b>	
<i>(a) Compulsory—</i>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Electrical Engineering	200
(4) Mechanical Engineering	200
(5) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200
TOTAL	800
<i>(b) Optional—</i>	
Any two of the following subjects :—	
(1) Physics (including Electricity & Magnetism)	100
(2) Electrical Communication Engineering	100
(3) Prime Movers	100
(4) Applied Mathematics	100
(5) Hydraulics and Hydraulic Machines	100
<b>I. Indian Supply Service, Class I</b>	
<i>Plan I</i>	
<i>(a) Compulsory—</i>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Applied Mechanics (as under item 5 under Schedule to Appendix II)	200
(4) Theory of Machines and Machine Design	200
(5) Prime Movers	200
TOTAL	800

<i>Subjects</i>	<i>Maximum Marks</i>
<b>(b) Optional—</b>	
Any two of the following subjects :—	
(1) Hydraulics and Hydraulic Machines	100
(2) Electrical Engineering	100
(3) Metallurgy	100
(4) Workshop Technology	100
(5) Physics (including Electricity and Magnetism)	100
(6) Workshop Organisation and Management	100
<b>Plan 2</b>	
<b>(a) Compulsory—</b>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Electrical Engineering	200
(4) Mechanical Engineering	200
(5) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200
<b>TOTAL</b>	<b>800</b>
<b>(b) Optional—</b>	
Any two of the following subjects :—	
(1) Physics (including Electricity and Magnetism)	100
(2) Electrical Communication Engineering	100
(3) Prime Movers	100
(4) Applied Mathematics	100
(5) Hydraulics and Hydraulic Machines	100
<b>J. Military Engineer Services, Class I (Buildings and Roads Cadre and Electrical and Mechanical Cadre)</b>	
<b>Buildings and Roads Cadre—</b>	
<b>(a) Compulsory—</b>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200
(4) Construction :	
<i>Paper I—</i>	100
(i) Building Materials and Building Construction.	
(ii) Design of Structures	
<i>Paper II—</i>	100
Roads, Railways, (General Principles governing the design of Railways, Roads, Harbours and other works).	
(5) Surveying	100
(6) Sanitary Engineering and Water Supply	100
<b>TOTAL</b>	<b>800</b>
<b>(b) Optional—</b>	
Any two of the following subjects :—	
(1) Prime Movers	100
(2) Hydraulics and Hydraulic Machines	100
(3) Electrical Engineering	100
(4) Mechanical Engineering	100
(5) Architecture and Town Planning	100
<b>Electrical and Mechanical Cadre—</b>	
<b>(a) Compulsory—</b>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Electrical Engineering	200
(4) Mechanical Engineering	200
(5) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200
<b>TOTAL</b>	<b>800</b>
<b>(b) Optional—</b>	
Any two of the following subjects :—	
(1) Physics (including Electricity and Magnetism)	100
(2) Electrical Communication Engineering	100
(3) Prime Movers	100
(4) Applied Mathematics	100
(5) Hydraulics and Hydraulic Machines	100

<i>Subjects</i>	<i>Maximum Marks</i>
<b>K. Indian Ordnance Factories Service, Class I</b>	
<b>(a) Compulsory—</b>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Mechanical Engineering	200
(4) Applied Mechanics (as under item 5 under Schedule to Appendix II)	200
(5) Electrical Engineering	200
<b>TOTAL</b>	<b>800</b>
<b>(b) Optional—</b>	
Any two of the following subjects :—	
(1) Physics (including Electricity and Magnetism)	100
(2) Applied Mathematics	100
(3) Prime Movers	100
(4) Hydraulics and Hydraulic Machines	100
(5) Workshop Technology	100
(6) Workshop Organisation and Management	100
(7) Theory of Machines and Machine Design	100
<b>L. Telegraph Engineering Service, Class I</b>	
<b>(a) Compulsory—</b>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Electrical Communication Engineering	100
(4) Electrical Engineering	150
(5) Applied Mathematics	100
(6) Mechanical Engineering	150
<b>TOTAL</b>	<b>700</b>
<b>(b) Optional—</b>	
Any two of the following subjects :—	
(1) Prime Movers	100
(2) Physics (including Electricity and Magnetism)	100
(3) Applied Mechanics (as under item 4 under Schedule to Appendix II)	100
<b>M. Central Engineering Service (Roads), Class I</b>	
<b>(a) Compulsory—</b>	
(1) English (including Essay and Precis Writing)	100
(2) General Knowledge	100
(3) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200
(4) Construction :	
<i>Paper I—</i>	100
(i) Building Materials and Building Construction	
(ii) Design of Structures	
<i>Paper II—</i>	100
Roads, Railways, (General Principles governing the design of Railways, Roads, Harbours and other works).	
(5) Surveying	100
(6) Sanitary Engineering and Water Supply	100
<b>TOTAL</b>	<b>800</b>
<b>(b) Optional—</b>	
Any two of the following subjects :—	
(1) Prime Movers	100
(2) Hydraulics and Hydraulic Machines	100
(3) Electrical Engineering	100
(4) Architecture and Town Planning	100
(5) Mechanical Engineering	100

NOTE 1.—All papers must be answered in English.

NOTE 2.—Candidates must write the papers in their own hand. In no circumstances will they be allowed the help of a scribe to write the answers for them.

3. The standard and syllabus of the examination will be such as prescribed in the Schedule annexed.

4. The Commission have discretion to fix qualifying marks in any or all the subjects of the examination.

5. Special attention will be paid in the Personality Test to assessing the candidates' capacity for leadership, initiative and intellectual curiosity, tact and other social qualities, mental and physical energy, powers of practical application and integrity of character.

6. From the marks assigned to candidates in each subject such deduction will be made as the Commission may consider necessary in order to secure that no credit is allowed for merely superficial knowledge.

7. Deductions up to 5 per cent. of the maximum marks for the written subjects will be made for illegible handwriting.

8. Credit will be given for orderly, effective and exact expression combined with due economy of words in all subjects of the examination.

## SCHEDULE TO APPENDIX II

### Standard and Syllabus

The standard of papers in English and General Knowledge will be such as may be expected of an Engineering Graduate. The standard of papers in other subjects will approximately be that of an Engineering Degree examination of an Indian University. There will be no practical examination in any of the subjects.

#### 1. ENGLISH

Questions to test the understanding of and the power to write English. Passages will usually be set for summary or precis.

#### 2. GENERAL KNOWLEDGE

General knowledge including knowledge of current events and of such matters of every day observation and experience in their scientific aspects as may be expected of an educated person who has not made a special study of any scientific subject. The paper will also include questions on Indian History and Geography of a nature which candidates should be able to answer without special study.

#### 3. APPLIED MATHEMATICS

*Statics.*—Vectors. Notation of force. Gravitational or Engineers' unit of force. Various kinds of forces. Friction. Composition and resolution of concurrent forces. Moments. Parallel forces and centres of gravity couples. Conditions of equilibrium of non-current coplanar forces. Funicular Polygon.

*Kinematics.*—Units of space and time. Rectilinear motion: motion of a projectile: angular motion, relative motion; simple harmonic motion.

*Kinetics.*—Newton's Laws. Absolute system of units. Linear momentum. Impact of elastic bodies. Impulse and impulsive forces, angular momentum; moments of inertia and radii of gyration; impulsive torque. Centrifugal forces. Conical pendulum. Motion of the centre of mass. Canton railway curves and banking of road-tracks. Hoop stress and stress in the rim of a fly-wheel.

Work, power, kinetic and potential energy. Principle of energy. Kinetic energy due to rotation. Works done by a couple. Principle of Virtual work. Simple machines, mechanical advantage, and velocity ratio. Stable and unstable equilibrium. Deflection in a framed structure. Oscillations. Simple and Compound pendulum. Units and dimensions.

*Hydrostatics.*—Fluid pressure, its transmission and measurements, density; specific gravity; metric system of units; resultant pressure: centre of pressure: equilibrium of floating bodies; metacentre: Laws of Boyle and Charles. Mixture of gases. Nature and action of simple hydraulic machines.

#### 4. APPLIED MECHANICS

[For Services other than Signal Engineering Department, Mechanical Engineering and Transportation (Power) Department, Indian Ordnance Factories Service, and Indian Supply Service (Plan 1)].

##### (a) Buildings

Consideration of material used in construction of roof-trusses. Steel and timber. Determination of stress in trusses by various methods. Dead-loads and wind pressure. Factors of safety and working stresses.

*Design of roof-trusses.*—Various types of roof-trusses and roof coverings; collar beam and hammer beam trusses.

Use of Euler's, Gordon's, Rankine's, Fidler's, Jhonson's, and straight line formulae in the design of struts. Buckling factors of struts; curves showing comparative strength of struts obtained by various formulae. Choice of size of sections. Finish of steel work, Joints, Design of end bearings; methods of fixing and supporting ends.

Application of circle and ellipse of stress and Clapeyron's theorem to design of structures.

*Cast Iron and Steel Columns.*—Flange and web connections to steel columns; caps; bases; transverse bracing of columns.

*Foundations.*—Safe pressures; foundations for columns. Slab foundations; cantilever foundation; Grillage foundations; Wells; piles.

*Retaining Walls and earth pressure.*—Rankine's theory; Wedge theory. Winger's and Bligh's graphical constructions, with corrections. Design of various types of retaining walls in masonry.

*Tall Masonry and Steel Chimneys.*—Theory and design.

*Design of steel and masonry.*—Reservoirs with considerations of wind pressure.

Deflection of framed structures and determination of stresses, etc., in redundant frames.

Influence diagrams for bending moment and shear for uniformly distributed and irregular loads on trusses, built-in beams and three-pinned, parabolic semi-elliptic and semi-circular arches.

General principles of dome design.

Principles of Building Design; consideration of loads on buildings. Steel Works, girders, etc., for buildings.

##### (b) Bridges

Design of superstructure. Determination by graphical and analytical methods of bending moment due to moving loads. Wind pressures.

Design of masonry bridges and culverts.

Plate-web girders. Analysis of stresses.

Warren and lattice girders.

Three-pinned arches; doubly pinned and rigid arches.

General consideration on the design of Suspension, cantilever and tabular bridges. Steel-arches bridges, Swing bridges.

##### (c) Reinforced Concrete

Shears bond and diagonal tension, its nature evaluation and location of reinforcement.

Design of simple and doubly reinforced beams and continuous beams.

Theory and design of reinforced concrete columns and piles. Design of slab foundations.

Design of simple cantilever and counterfort retaining walls. Equivalent moments of inertia for reinforced concrete sections.

Theory of elastic deflections and outline of investigation of stresses in reinforced concrete arches.

##### (d) General

Analysis of stress, analysis of strain, elastic limit and ultimate strength relation between the elastic constants. Launched-Weyrach formula for working stresses in a structural member and determination of its cross-sectional area. Repetition of stresses. Bending moment and shearing force diagrams for dead-loads. Graphical determination of stresses in frames; effect of wind pressure; method of sections. Stress in the cross-section of a beam due to bending ( $M/I = F/Y = E/R$ ); compound and conjugated stresses. Rankine's theory of earth pressure; depth of foundations and strength of footings. Grillage foundations; Columb's theory of earth pressure; modification due to Rebahn.

Bending moment and shearing force diagrams for live loads. Analysis of uniform and uniformly varying stress. Elastic theory of bending of beams; bending and shear stresses in beams. Modulus of section and equivalent areas. Maximum and minimum stresses in a joint due to eccentric loading, stresses in dams and chimneys. Stability of block-work structure. Design of rivetted joint and stresses in boiler shells. Euler's theory concerning struts; modifications due to Rankine, Gordon and others. Torsion. Combined torsion and bending deflections. Encastre beams. Continuous beams and theorem of three moments. Elastic theory of arches. Masonry arches.

#### 5. APPLIED MECHANICS

[For Signal Engineering Department, Mechanical Engineering and Transportation (Power) Department, Indian Ordnance Factories Service, and Indian Supply Service (Plan 1) only].

(a) *Statics*: Forces acting on a rigid body; moments of forces; composition and resolution of forces; friction; machines; efficiency; couples; conditions of equilibrium, with application to simple framed structures and beams; bending moment and shear force diagrams for dead-loads.

(b) *Hydrostatics*: Pressure at a point in a liquid, centre of pressure on an immersed plane area, equilibrium of floating bodies.

(c) *Kinematics (of Motion in a plane)*: Velocity and acceleration of a point; relative motion; acceleration of a point moving in a circular path with uniform speed; simple harmonic motion; velocity-ratio; diagrams of simple mechanisms; instantaneous centre.

(d) *Kinetics*: Force, mass, impulse momentum, works, energy, power; moment of momentum, moment of inertia; their relations and measurements; conservation of energy; conservation of linear momentum; rectilinear motion of a body under a force (constant or variable), equation of motion of a particle; motion of body in circular path with uniform speed balancing of rotating masses; rotation and oscillation of a body about a fixed axis.

(e) *Hydraulics*: Pressure and velocity change along a streamline; Bernoulli's theorem; flow through an orifice.

(f) *Stress and Strain*: Stress and strain in tension, compression and shear; Hooke's law; Relations between elastic constant; combined stress in two dimensions; circle diagrams; compound bars in tension and compression; elementary consideration of stress due to temperature changes.



(g) Bending moment and shearing force diagrams for live loads. Analysis of uniform and uniformly varying stress : elastic theory of bending of beams; bending and shear stresses in beams; Modulus of section and equivalent areas; maximum and minimum stresses in a joint due to eccentric loading; design of rivetted joints and stresses in boiler shells; welded joints.

(h) *Cylinders* : Thin cylindrical and spherical shells under internal pressure; stress in thick-walled cylinders under internal and external pressure; force and shrink fits.

(i) *Torsion* : Torsion of round bars, transmission of power by shafts.

(j) *Combined Stresses* : Combined bending and direct stress and combined bending and torsion.

(k) *Strain Energy* : Work done in elastic deformation; Stresses due to suddenly applied loads.

(l) *Springs* : Laminated springs and close-coiled helical springs.

(m) *Struts* : Elementary theory of struts with use of empirical formulae.

(n) *Property of materials* : The mechanical properties of materials; composition and properties of the important metals used by engineers; effect of heat treatment, annealing and normalizing; effect of cold work on the properties of metals; elasticity, plasticity, ductility, tenacity, hardness, resistance to shock; resistance of repeated and alternating stress; effect of form and surface conditions; failure under combined stress; creep at high temperatures; considerations affecting the choice of the safe working stress in design.

## 6. ELECTRICAL ENGINEERING

*Direct Current*.—Principles of generators and motor. Types and characteristics. Starting and controlling appliances. Methods of testing of generators and motors. Operation in parallel of direct current generators. Types and general features of primary batteries. Testing of primary batteries. Types and testing of storage batteries. Method of charging Boosters and other auxiliary appliances.

*Alternating Currents*.—Production of alternating currents. Frequency and wave shape. Graphic representation of current, voltage and power in A.C. Circuits. Maximum and "R.M.S." Value of simple sine wave. Effect of resistance inductance and capacity in A.C. circuit. Power and power factor in A.C. circuit. Single phase and poly-phase currents. Connections of poly-phase systems. Power Measurement in poly-phase circuits. Theory of alternator and its regulation. Parallel running. Theory of transformer. Transmission of poly-phase currents. Synchronous motors and Induction motors. Methods of starting. Efficiency and characteristics. Circle diagrams and testing of motors. Improvement of power factor. Motor converter and rotary converter and methods of starting of rotary converter. Principle of automatic voltage regulator.

*Electrical Instruments and Measurements*.—Principles of construction and theory of measuring instruments for direct and alternating currents. Commercial types. Calibrations of instruments. Measurements of resistances. Ohm-Meters. Types of bridges for measuring resistances. Potentiometer Phase and frequency meters. Synchroscope. Type of wattmeter.

*Transmission and Distribution of Electrical Energy*.—Systems of supply, economic voltage and size of conductor, Formulae for determination of size of conductor for standard systems of distribution of the load, voltage, etc., being given. Factors influencing voltage drop in D.C. and A.C. transmission lines. Influence of power factor of the load on voltage regulation of a transmission line. Standard equipment of generator and motor control panels for different types of D.C. and A.C. generators and motors.

## 7. PHYSICS (INCLUDING ELECTRICITY AND MAGNETISM)

*Heat*.—The methods of calorimetry and thermometry. Vapor-pressure, critical temperature and pressure, Conduction and diffusion of heat and the determination of constants. Radiation and absorption; laws of cooling. Theory of exchanges; methods of measuring radiation, laws of thermodynamics; simple applications.

*Light*.—Velocity of light; Illumination, photometry. Archromatism in lens system; direct-vision spectroscope.

*The wave theory*.—Simple interference phenomena. Huygen's principle explanation of straight line propagation, reflection and refraction of light. Action of mirror lenses, etc. reviewed from this standpoint. Simple diffraction phenomena. Gratings, and wavelengths determination. Spectrum analysis; Doppler's principle. Double refraction and polarization of light; rotary polarization; simple application.

*Magnetism*.—Forces on a magnet in a magnetic field. Determination of axes and moment of magnet. Magnetic potential level surfaces. Interaction of two short magnets; determination of field strength Magnetic shell; its potential energy in magnetic field. Total normal induction. Gauss' theorem; number of lines of force. Magnetic induction in iron, etc. Theory of magnetism.

The magnetic field of the earth; elements and their variations; the compass and its corrections.

*Electricity*.—Electric capacity, specific inductive capacity. Distribution of electricity on surface of conductors; images. Value of electric force in simple cases of distribution. The mechanical force on charged conductors energy of electrified systems. The dielectric medium; dielectric displacement currents.

Wheatstone's bridge, specific resistance; resistance thermometers. Conductivity of electrolytes; ionization; migration phenomena; accumulators. Standard cells; the potentiometer system of measurement. Thermoelectricity, application of thermo-dynamics; thermoelectric diagrams. Electro-magnetic induction; coefficients of induction; induction coils. Energy of circuit carrying current when placed in a magnetic field; mechanical force on conductors carrying current; moving coil instruments. Leuz's law; illustration from dynamos and motors; etc. Determination of current resistance; E.M.F. in absolute measure. The discharge of a condenser; electric waves. Elementary theory of the electron.

The elementary theory of the continuous current dynamo and motor and of the alternating current dynamo. General principles of the application of electricity to lighting, power transmission; telegraphy etc.

*Sound*.—The transmission of energy through material media by wave-motion; speed of propagation of waves of permanent type. Nature of musical sounds; pitch; scales. Reflection and refraction of sound; influence of wave-length. The vibration of strings, bars, plates and gas columns, resonance. Interference and diffraction phenomena. Analysis of sound. Measurement of wavelength, velocity and pitch.

## 8. PRIME MOVERS

*Fuel Gas Plants and Boilers*—

*Fuel*—

(a) Coal, wood, petroleum, gas, petrol, alcohol, etc.; Physical characteristics, approximate chemical composition; heat of combustion.

(b) *Gas Plant*.—Gas producers; pressure and suction plants arrangement and working.

(c) *Boilers*.—Draught; natural, forced and induced. Ordinary forms of stationary, locomotive, marine, water-tube and other type; heating surface, firegrate area; boiler efficiency; superheaters; feedwater heaters; accessories and management.

*Theory of Heat Engines*—

(a) Thermodynamical principles; Carnot's cycle, perfect heat engine; second law.

(b) *Air engines*.—Stirling and other forms.

(c) *Internal Combustion Engines*.—Gas, oil and petrol engines; types and working; features of cycles. Proportioning of mixtures; efficiencies.

(d) *Steam*.—Thermodynamics of the generation, expansion and condensation of steam; heat diagrams; etc.

(e) Steam Engines and turbines, with special reference to modern developments.

(f) *Refrigerating Plants*.—Theory and general arrangement of the more common types.

(g) *Air Compressors*.—Theory of Pneumatic working.

*Generating Plant, Accessories and Details*—

(a) General arrangements and construction of the more important types.

(b) Condensers air-pumps, circulating pumps, cooling tanks, etc.

(c) Carburettors and systems of ignition.

(d) Cylinders, pistons, cross-heads, guides, connecting rods, cranks, governors, fly-wheels, valves, and valve gears, glands and pipes.

(e) *Engine-Testing*.—Consumption of steam and fuel, gas and oil, breaks and dynamometers; indicators and indicator diagrams.

## 9. HYDRAULICS AND HYDRAULIC MACHINES

*Hydraulics*.—Definitions relating to flow of water streamline motion. Bernoulli's theorem. Venturimeter.

Flow of water through small and large orifices; drowned orifices; sudden enlargements and contractions in flow of water. Time of emptying tanks. Flood absorptive capacity of tanks.

Flow of water over notches and weirs.

Flow of water through pipes; hydraulic gradients; losses of head due to bands contraction and sudden enlargements; losses of head through siphons. Impacts at bends and thrust blocks.

Flow of water in open channels and in pipe; Chezy Bazin, Kutters and other formulae and their applications; cross sections of greatest efficiency.

Calculations of afflux and back water curve.

Gauging the flow of water in open channels, watermeters.

Hydraulics and hydrostatics of weirs and other canal works.

Hydrokinetics; uniform and steady flow streamline and turbulent motion. Bernoulli's theorem and its application.

Discharge through orifices and mouth pieces, and over notches and weirs. Variable heads. Laws of fluid friction. Head lost due to friction.

**Hydraulic Machinery.**—Impact of water on fixed and moving vane. Turbines, impulse and reaction. Description of different types of turbines. Determination of vane angles. Efficiencies of turbine plant. Governing.

**Pumps.**—Reciprocating centrifugal and turbine.

## 10. CONSTRUCTION

### PAPER I.—(i) BUILDING MATERIALS

**Stones.**—General characteristics of building stones. Chief varieties and uses. Quarrying. Blasting. Crushing. Screening. Dressing. Machinery and Tools used. Strength. Causes of decay and methods of preservation. Tests. Artificial stone. Manufacture and use.

#### Bricks and Tiles—

General characteristics, varieties and use. Manufacture. Selecting clay, moulding and burning in kilns, Bull's and Hoffman's kilns. Causes of decay and methods of preservation. Strength. Essentials of good bricks. Mangalore and country tiles. Salt glazed pipes and China clay ware. Terracotta and refractory materials. Cement Block hollow and solid. Cement tiles, flooring, etc. Dados, etc. Machinery used.

#### Glass and plastics—

**Glass.**—General characteristics, varieties, composition, manufacture and uses. **Plastic.**—Composition, properties and uses of celluloid, bakelite, ebonite, vitrolite, marbarite, etc.

#### Cement, limes, mortars and concrete—

**Cement.**—Composition and manufacture. Storing, varieties and use. Normal rapid hardening and low heat cements, Aluminous Cements; Properties B.S.S., Tests.

**Limes.**—Hydraulic and fat. Occurrence, collection, burning, slacking and storing artificial hydraulic limes; gypsum; Plaster of Paris. Properties and uses. Tests.

**Sand Pozzulan.**—Properties, grading fineness, modulus, etc. Tests.

**Mortars.**—Lime mortars; ordinary and hydraulic. Use of sand and surkhi Composition. Preparation, mixing and grinding. Storing. Uses. Properties. Strength and tests. Cement mortars. Composition, preparation and use. Properties, gauged mortars. Proportioning of materials in mortars. Effect of water on strength. Mud mortars and effect of water on their strength.

**Concrete.**—Lime concrete composition, preparation and use. Properties and strength test cement modulus and mixing Water-cement ratio. Properties strength, uses and tests. Water proofing and surface treatment.

**Timber.**—Varieties, classification, characteristics test and uses of Indian timber. Defect in timber and concrete-constituents—Proportioning, grading, fineness, causes of decay, Seasoning and preservation. Fire proofing. Market and standard sizes for different purposes.

Plywood and pressed wood. Manufacture properties and uses. Proprietary timber products used for sound; thermal products; used for sound and thermal insulation.

#### Masonry—

**Stone masonry.**—Materials, dressing, laying and jointing. Instruments and tools, Classes of masonry, uncoursed and coursed rubble, random rubble, ashlar and block-in-course. Bonding of stones, Dry stone masonry. Pitching, Lifting devices; scaffolding. Terms used in masonry. Strength of and safeloads on masonry. Plain masonry and brick-work masonry.

Materials, brick laying and bonding, brick nogging. Brick laying in footings damp proof course, isolated columns, piers chimneys, fire places, arches, vaults domes, inverts, centerings etc. Reinforced brick work. Scaffolding. Strength of brick masonry. Safe loads on brick work.

#### Iron and Steel—

Varieties, classification, composition, characteristics, tests and uses of iron and steel. Important iron ores and their properties. Elements of manufacture of iron and steel by different processes. Modern steels and alloy steels, their properties and uses. Rolling mills for mild steel sections and types of British standard sections for structural steel. Metallic products; pipes, tubes, plain and corrugated iron sheets. Cast iron and steel casting. Flaws in iron and steel.

**Preservatives.**—Composition, preparation properties, tests and uses of paints, polishes, varnishes, distempers and oils and pigments used.

#### Miscellaneous—

I. Carbonaceous cementing materials; asphalt and bitumen, natural and artificial asphaltic products. Properties and uses.

II. Asbestos and asbestos cement sheets, masonite, celotex, teetex and other products. Properties and uses.

III. Rubber, leatherfelt, coir and their products, wire ropes, properties and uses.

## (ii) DESIGN OF STRUCTURES

**Buildings.**—Preliminary investigations as to the suitability of site for different types of buildings, trial pits and borings, determination of bearing capacity of soils. Design of residential houses.

**Foundations.**—(a) General: Structural properties of soil, Principles of mechanics of resistance of soils.

Examination of soils probing sounding and borings; (wash boring, percussion boring, rotary boring) Boring tools. Trial pits. Testing soils for bearing pressure: Direct and indirect tests. Test piles.

(b) Bearing capacity of soils: Rock, clay and sandy soils: alluvium: quicksand. Black cotton soil. Reclaimed soil. Improving bearing capacity of soils by various methods. Transmission of Load to foundations dead load, live load, and wind load. Impact factor. Ratio of live load and dead load.

(c) Shallow foundations. Area of foundations, Spread footings. Timber and steel grillage foundation. R.C.C. Raft inverted arches. Foundations under eccentric loads; boundary footings. Depth of foundations.

(d) Preparation of bed: Demolition. Under-pining. Excavation, shoring and timbering of trenches. Bailing-out water.

(e) Deep foundations: Friction and bearing piles; timber, steel and cast iron piles. Screw piles, Precast cast *in situ*, (virbio Franki) concrete piles. Bored piles. Pressure Piles. Pile driving. Safe load on piles; Hiley's formula.

Plain masonry and brick work, floor and roofs carpentry and joinery, stairs columns, scaffolding hoisting appliances for constructions and maintenance of safety measures.

#### Structural plumbing:—

**Fire proof construction.**—Protection of timber steel and concrete from fire. Storing room construction.

Thermal insulating properties of masonry and concrete walls and plasters. Insulating boards. Thermal insulation of buildings.

Acoustics of buildings. Use of sound-proofing materials.

**Structures.**—Columns under bending and shear due to lateral loads. Caps and footings.

#### Fixed and continuous Beams:—

**Rolling loads.**—Influence lines for Bending moment and shear for beams. Influence lines for stresses in members of framed girders with straight and curved beams and subdivided panels.

Detailed design of rivetted and welded connections.

Detail design of plate and lattice girders.

**Retaining walls.**—Theories of Earth Pressures; effect of surcharge; stability of retaining walls. Elements of soil mechanics.

Deflection of framed Structures; Williot Mohr diagrams. Stresses in redundant frames.

**Arches.**—Three hinged, two hinged and fixed arches. Influence lines for Bending moment, shear and thrust. Stresses due to loading, temperature and yielding of abutments.

**Suspension Bridges.**—Three hinged and two hinged stiffening girders.

Analysis of simple rigid frames; Method of distribution of moments, and various other methods.

Simple structures such as rectangular and circular water towers tanks; hemispherical, conical and segmental domes; retaining walls with or without counterforts.

#### Reinforced concrete construction:—

**Concrete.**—Various mixes and their uses—reinforcements round bars fabrics. Hybrid etc. Bending and placing reinforcement in slabs beams, and columns (Rectangular and T. Beams, with single and double reinforcements). Shear and bond stress. Columns under axial and eccentric loads. Simple and combined footings.

**Steel Construction.**—Beams and girders. Properties of British Standard sections; detailed design of beams, compound girders, built up plate girders and lattice girders, limiting spans and economical depths, designs of flanges and webs, curtailment of flange plates, determination of size, pitch and arrangement of rivets; types of stiffeners and rulers for their spacing; design of joints and connections; methods of fabrication; detailed design of crane and gantry girders of built-up plate and lattice girder types and typical details of constructions.

**Columns and struts.**—Plain and built up sections; assumptions regarding end conditions; practical formulae for design; detailed design of stanchions for buildings and of compression members of roof trusses and lattice girders; design and details of caps, bases and brackets for stanchions; joints and splices on stanchions; sizes pitch and arrangements of rivets on flanges of plated stanchions, lacing on stanchions.



*Roof trusses.*—Types of roof trusses; limiting spans rise and camber; economical spacing data for design; detailed design of members including purlins, joints and connections; wind bracing on roof trusses, detailed design of steel framed sheds.

*Bridges :—*

General principles of design—Alignment, number of spans, economic spans water-way calculations, depth of foundation. Scour depth, afflux clearance etc.

*Loading :—*

Dead load, live load, impact factors—loading on road and railway bridges.

*Substructures.*—Abutments, wing walls and piers conditions of stability, types, design and construction—foundations.

*Superstructures.*—Different types of Road and Railway bridges. Choice of material and type. Bridge floors. Wearing surface on bridges. Methods of erection. Maintenance and preservation.

*Culverts.*—Box, pipe and Irish culverts. Cause ways and subsurface bridges, general principles of construction.

*Approaches.*—Influence of conditions of approaches on the selection of the type of bridges—Construction of approaches.

## PAPER II

General principles governing the design of Railway, Harbours, Aerodromes and other works.

*Railways.*—Permanent way—Ballast, sleepers, rail chairs and fastenings.

*Points and crossings.*—Details of construction, different types, turnouts, cross-over formulae and practical rules for setting out.

Plate laying and maintenance of track, super elevation, creep of rails, ruling gradient Compensation, tract resistance tractive effort. Station yards and machinery, station buildings, platforms, sidings, signals and signal mechanism, staff quarters, Engine sheds, turn tables, water columns, aspits etc.

Level crossings in mountain railways.

Tunnels and their alignments and methods of construction.

*Road.*—Classification of roads—Estimation of traffic, availability of materials and choice of type of roads, tests of materials, gradient camber. Road foundation and under-drainage, road surfaces, water bound macadam, tar sprayed macadam, tar macadam hot and cold emulsions, bituminous carpets, stone paving, wood block paving, asphalt roads, plain and reinforced concrete roads. Standard specifications; resistance to motion of vehicles and influence of various roads surface. Machinery employed—latest advances in highway engineering. Road signs and traffic control, Arboriculture.

*Harbours, and other work :—*

Physical geography in relation to docks and harbours : natural phenomena, prevalence and intensity of winds, coastal change; accretion and denundation; effect of artificial interference; tidal phenomena; waves form, height and length, wave velocity and wave action.

Objects of docks and harbours; consideration effecting choice of site; entrances to docks and harbours; foreshore protection and channel regulation; wet dry and floating docks; tidal basins and harbour, different forms and types, details and methods of construction. Lock gates, their construction and working, machinery employed. Different types of quay walls, their construction and maintenance; signals and lighthouses, ferries and landing piers. Description of important existing docks and harbours. Latest advancement in dock and harbour engineering.

*Aerodromes :—*

Aerodromes, their importance and spacing position and relation to the air zone, Runways, Orientation. Flying Obstructions.

*Economics of aerodrome operation :—*

Location of auxiliary buildings and traffic control in the vicinity of aerodrome and their effect on design. Location and design of terminal buildings. International standards.

## 11. SURVEYING

*Surveying.*—Construction of Scales. Conventional signs, Use and adjustment of instruments. Theory of levelling, simple, compound check and reciprocal levelling. Various causes of errors in levelling. Elimination of such errors. Customary limits for errors. Method of keeping various styles of field-books. Use of boning rods, Chain survey. Chain and compass survey.

*Theodolite.*—Traversing by Gales traverse system for city and town improvement surveys. Source of errors and required precision in traversing. Traverse tables. Theory and use of the simple plane-table and tangent clinometer, with and without the magnetic compass. Theory and use of the stadia method of plane-tableing, with levelled heights and reductions of distances and heights by slide rule. The three-point problem of plane-tableing by resection from within and without the triangle. Geometrical and trigonometrical proof of

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the three-point problem. The two-point problem with and without the magnetic compass. Triangulation with reciprocal value; heights of stations; base line measurements. Finding value of position by observations to three known points. Computation by rectangular co-ordinates with convergency correction.

Contouring the triangulated areas by the heights calculated from the reduced levels. Longitudinal and cross sections run with a level. The location on the map of a road-railway canal or weir, etc. The general principles of tunnel alignment and of carrying surface meridians underground for mine-surveys. Discussion on the latest patterns of instruments.

*Practical Astronomy.*—Instruction in spherical trigonometry up to the solution of the spherical triangle and the adoption of Napier's rules of circular parts. Definitions; systems of celestial co-ordinates, the reason for sidereal, sun and mean time; acceleration retardation and equation of time. The Julian and Gregorian calendars; time and the various astronomical corrections.

Finding the meridian of a place by observations to the sun or a star at upper culmination by equal altitudes, by the sun or stars not in the meridian and by circumpolar stars at elongation; and finding time by the sun or stars on the meridian and ex-meridian; finding latitudes by Polaris and circum-meridional observations. Use and constructions of sun dials.

*Railway curves and Alignment.*—Theory of curves, curves laid out with the aid of angular instruments with one theodolite. Curves laid out by linear measurements only. By-chords and off sets (several methods). By off sets inside the Curve with certain ordinates from the long chord. Curve with certain given data to pass through a ruling point. Compound curves. Diversion curve. Vertical curves. Curves spiral or transition line. Setting on pegs for earthwork. Computation of areas of cross sections, etc.

## 12. SANITARY ENGINEERING AND WATER SUPPLY

*General.*—Elementary Bacteriology and Chemistry of water and sewage.

*Water Supply.*—History and development of public water supplies; sources of supply; standards of purity for public water supplies, Quantity supplied *per capita* intakes. Pumping and gravity schemes. Water towers. Purifications, slow and rapid sand filtration. Sterilisation. Clear water reservoirs. Softening Pipes. Valves and fittings. Distribution of water. Detection and prevention of waste. Metering.

*Sanitation.*—Site and orientation of Buildings. Damp proof courses ventilation. Air conditioning. House drainage. Conservancy and water-borne systems. Sanitary appliances. Constructions and testing of house drains. Pail depots. Public latrines and urinals.

*Prevention of Malaria incidental to engineering construction—*

*Sewerage.*—Separate, combined and partially separate systems. Forms cross-sections, capacities and inclinations of sewers. Construction of sewers. Calculations of storm water. Storm water overflows, syphons. Lifts ejectors and pumps for sewage. Manholes and lamp eyes. Flushing of sewers.

*Sewage disposal.*—Characteristics and composition of sewage, Essentials with regard to sewage treatment. Selections of site for disposal works. Disposal at dilution and treatment. Simple sedimentation and chemical precipitation. Contact beds. Percolating filters. Septic tanks, Imhoff tanks. Activated sludge process. Sludge disposal by various methods.

*Refuse.*—Collection and disposal of refuse.

## 13. ELECTRICAL COMMUNICATION ENGINEERING

### A—TELEGRAPHY

1. *Morse Telegraph Apparatus.*—Description of Signalling, Keys, Sounders, Relays, Galvanometers, Balancing boxes, Switches, etc., and their use in Morse Telegraphy.

2. *Morse Circuits.*—(a) Arrangements of apparatus and circuit connection for Simple and Differential and Aridge Duplex working terminal and Repeater offices. Single current and Double current working.

(b) General Principle of Quadruplex working.

3. *Multiplex Telegraphy.*—(a) Principle of Multiplex Baudot printing. Telegraph. Different methods of working the Baudot system. Double and quadruple working. Description of principal apparatus used in Baudot. Telegraphy including Retransmitter, Trade Transmitters. Key Board Perforators, etc. and their use.

(b) Teleprinters working. General principle of the "Stop Start" system of working. Teleprinter and its principle of action. General knowledge of its principal parts.

4. Testing of Lines and Cables and details of apparatus employed for such tests.

5. Power arrangements for Telegraph and Telephone offices. Use of Motor Generators, Rectifiers, charging Boards, Primary Cells and Accumulator.

6. Elementary Principles of Construction of Telegraph Lines.—Description of Underground and Underwater Cables. How they are manufactured and laid.

## B.—TELEPHONY

1. *Manual System*.—General principles of Magnetic Semi Central Battery, and Central Battery systems of working. Details of Exchange and Sub-office apparatus, and their circuit diagrams including Private Branch office equipments. Protective devices in Exchange and sub-office and at Cable and line Terminals. Details of Party Line working with Selective ringing.

2. *Automatic System*.—General principle of well known systems of Automatic Exchanges. Schematic Circuit diagrams of principal Exchange equipment. Automatic branch Exchanges. Details of Subscribers'. Apparatus for the above systems.

3. *Telephone Transmissions*.—Principles of Transposition of Telephone Circuits. Prevention of Inductive interference on Telephone Circuit. Characteristics of Telephone Circuits. Impedance of Telephone Circuits, and its measurements. Attenuation and Wavelength Constants. Decibel and Neper-Mile Standard Cable. Transmission loss measurement. Wave filter. Carrier Current working. Telephone Repeater.

Thermionic Valves and their use in Telephony.

## C.—RADIO TELEGRAPHY AND TELEPHONY

1. General details of Oscillatory Circuits. Natural Frequency and Wavelength. Logarithmic decrement. Forced Oscillation.

Long Wave and Short Wave Radio working. Points of difference between the two systems.

Various methods of Reception and Transmission of Electromagnetic waves. Different types of detectors and their adjuncts.

Thermionic valves as used on Wireless Telegraphy and Wireless Telephony. Valves as Detectors. Amplifiers, Rectifiers, Modulators and Oscillation Generators. Details of Transmitting and Receiving Circuits. Radiation of Electro Magnetic Waves. Atmospheric effects. Fading. Power plant for Wireless offices. Elementary principle of design of Aerials and Earths for Long and Short Wave systems. Directional Transmission and Reception.

## 14. MECHANICAL ENGINEERING

*Theory of Machines and Machine Design*

*Kinematics*.—Method of determining the relative velocities of parts in machines, by calculation and by graphic methods. Velocity and acceleration, diagrams for the ordinary reciprocating engine and for quick return motions. Velocity ratios for toothed gearing including epicyclic gears. Velocity and acceleration in cam gears.

*Kinetics*.—Balancing of motors and of reciprocating engines. Crank effort diagram of engines and speed variation of flywheels. Governors Simple causes of vibration problems. Whirling of shafts and torsional oscillations.

*Friction*.—Power transmitted or absorbed by belt drives and brakes. Friction in gearings. Friction and lubrication of journal and thrust bearings, ball and roller bearings. Screw gears.

Design of fastenings and Machine Parts. Proportions for rivetted, bolted and welded joints and fastenings, pipe connections—Crank, rods and levers, valves, pipes and cylinders, bearings, coupling, shafts and keyways. Tooth profile.

*Properties and Strength of Materials*

Stress and strain tension, compression, and shear.

Hooke's law. Relations between elastic constants.

Simple cases of combined stress in two dimensions. Circle diagram.

Compound bars in tension and compression. Elementary consideration of stress due to temperature changes.

Rivetted and welded joints.

Thin cylindrical and spherical shells under internal pressure.

Stresses in thick-walled cylinders under internal and external pressure.

Bending moments and shearing forces.

Simple theory of beams.

Slope and deflection of cantilevers and freely supported beams for sample cases of loading.

Torsion of round bars. Transmission of power by shafts.

Simple cases of combined bending and direct stress, and combined bending and torsion.

Work done in elastic deformation. Strain energy, Stresses due to suddenly applied loads.

Laminated springs and close coiled helical springs.

Elementary theory of strut with use of empirical formulae.

The mechanical properties of materials. Composition and properties of the important metals used by engineers. Effects of heat treatment, annealing, and normalising. The effect of

cold work on the properties of metals. Elasticity, plasticity, ductility, tenacity, hardness, resistance to shock, resistance to repeated and alternating stress. Creep and elevated temperatures. Common types of machine and instruments for the investigation of mechanical properties. Forms of specimen, procedure in carrying out tests, and methods of expressing results.

## Heat Engines

Physical properties of steam; steam tables and their use. Fundamental laws of thermodynamics. Reversible and irreversible process. Ideal and actual cycles. Construction and use of temperature-entropy and heat-entropy charts.

Behaviour of steam in engine cylinders. Jacketing Superheating. Compounding Horse Power and steam consumption.

Testing of engines, Indicators and indicator diagrams. Combination of indicator diagrams for multiple expansion engines. Brake and Brake horse-power. Mechanical and thermal efficiencies. Steam consumption and heat balance for steam plants. The steam turbine. Steam flow in nozzles and blading. Calculations relating to blading and horse-power. Steam cycles in modern power plants. Regenerative feed heating and steam reheating cycles. Condensing plants; Jet and surface condensers. Air pumps. Air ejectors. Condensate extraction pumps. Fuels. Combustion: air supply and regulation. Analysis of fluid gases. Boilers, Super-heaters, Economisers. Air preheaters. Furnaces. Boiler trials. Valve. Valve gear and valve diagrams. Governing. Crank effort diagrams. Flywheels. Balancing of engines.

The laws of perfect gases. Expansion and compression. Ideal cycles applicable to the internal combustion engine, and their representation by pressure volume and entropy temperature diagrams. Air standard efficiencies. Comparison of actual and ideal efficiency.

General properties of liquid and gaseous fuels. Calorific value and its determination. Combustion. Calculation of air-fuel ratios. Use of exhaust gas analysis. Volumetric efficiency. Gas producer.

The classification and cycles of operation of gas engines, petrol engines and heavy oil engines. Character of combustion process.

The general construction of internal combustion engines. Carburettors. Electrical ignition systems. Fuel pumps and injection systems. Governors and fuel control. Supercharges.

The mechanics of internal combustion engine-speed fluctuation—Balancing.

The testing of internal combustion engines. Apparatus and procedure. Indicators, Characteristics of Indicator diagrams. Fuel consumption and heat distribution. Engine losses. The representation and interpretation of test results.

*Hydraulics and Hydraulic Machinery*

Pressure of water at a point. Centre of pressure. Pressure on a surface. Flow of water, through orifices, notches, and weirs. Laws of Fluid friction. Steady flow in pipes and uniform channels. General phenomena of flow in rivers. Gauging of flow in pipes and open channels. Dynamical similarity. Impact of jets on plane. Types of turbines. General principles of design of turbines. Governing of turbines; types of pumping machinery. General principles of design of centrifugal pumps. Hydraulic cranes and hoists. Hydraulic transmission gear. General principles of hydraulic transmission of power.

## 15. ARCHITECTURE AND TOWN PLANNING

## A. ARCHITECTURE

1. *History of Architecture*—

Western: The chief periods and styles from ancient Greek to modern.

Indian: Buddhist, Early Hindu, Muslim and Modern

2. *Theory of Architecture*—

General principles, Elements of composition. Accommodation and circulation. Balance and proportion. Function Harmony and Contract Style.

3. *Architectural Construction*—

Drainage. Foundations. Materials. Walls. Roofing beams, arches and vaults-minor, elements-decoration. Plumbing, heating, ventilating, lighting, acoustics, sanitation, colour.

4. *Quantities Estimates, Contracts, Laws*—

## B. TOWN PLANNING

1. *History of Town Planning*.—Ancient, medieval and modern. Effects of social changes.

2. *Practice*.—Surveys, General Principles, sites, climate, water supply drainage; transport, Zoning focal centres and their distribution. Highways, Public service and amenities. Uniformity and variety.

3. *Laws*.—Authorities—Contracts, local special Bye-laws, Acquisition of land.

## 16. THEORY OF MACHINES AND MACHINE DESIGN

*Kinematics*.—Methods of determining the relative velocities of parts in machines, by calculation and by graphic methods. Simple cases of acceleration diagrams.

*Cams*.—Harmonic, constant-velocity and constant acceleration types; displacement, velocity and acceleration of follower.

*Gears Gearing*.—Theory of shape and action of teeth; simple compound and epicyclic trains. Worm gears, Strength and durability of teeth, Engine turning moment diagrams; fly-wheels, governors.

*Balancing*.—Rotating parts, primary balancing of reciprocating parts, including locomotive balancing and secondary balancing of 'in line' engines.

*Vibrations*.—Body with single degree of freedom; torsional oscillations of shafts with attached masses. Whirling of shafts.

*Gyroscope*.—Theory and action. Tractive effort and performance curves for vehicles. Friction and Lubrication. Dry friction; friction circle, friction clutches, screws, collar friction. Belt and rope drives.

Analysis of forces in simple mechanisms. Design of parts subjects to pure bending or pure torsion e.g. pin connections; levers; shafting, springs. Simple clutches and flexible joints in shafting.

Design of parts subjected to combined bending, torsion and direct stress, e.g., cranked members; eccentrically loaded connections (bolted and rivetted).

Design involving applications of kinematics e.g., gears and bear wheels; nut and screw mechanisms; cams; lubrication; design of bearings for given loads; use of ball and roller journal and thrust bearings; influence on design of fatigue and stress concentrations.

Design of belts, ropes, pulleys, flywheels, thin and thick pipes.

Note.—Candidates will be expected to show competency in making dimensioned hand sketches in good proportion. Drawing instruments may be used.

## 17. METALLURGY

Elementary consideration of the structure of metals. Crystals, grains, grain boundaries; Construction and interpretation of thermal equilibrium diagrams.

Structure of alloys; eutectics; solid solutions, intermetallic compounds—critical points in straight carbon steel.

Mechanical properties and their assessment. Standard methods of testing elementary effects of mechanical work on structure and physical properties. Fatigue, Creep, Corrosion Plastic properties.

### Iron and Steel—

Methods of manufacture; brief outline of pig iron manufacture. The different types of pig iron and their uses; beamatic, basic foundry cold-blast. Wrought iron. Steel-making regarded as a chemical process. Outline of crucible, Bessemer, openhearth, and electrical furnace practice. Relationship between process and manufacture and specific properties.

Effects of common elements of carbon steel. British Standard Specification for plain carbon steels. Structure of steel ingots as cast. Effects of hot and cold deformation on the structure and mechanical properties of steel. Effects of alloy elements. The common alloy steels. High-speed steels. Classification of straight-carbon and alloy steels according to their uses.

*Cast iron*.—Malleable cast iron. Moulding Influence of design and section thickness on the structure of iron and steel castings.

Machinability of ferrous metals as affected by composition and treatment.

### Non-ferrous metals—

A study of the uses, physical, and mechanical properties of the principal non-ferrous alloys of industrial importance, with special reference to standard specifications. Hot and cold working. Alloys suitable for diecasting. Bearing Metals Relationship between structure and duty.

### Heat Treatment of Metals

#### General industrial pyrometry

Normalizing, annealing, quenching, and tempering of plain carbon steels—effects of microstructure and mechanical properties. Case-hardening and nitriding. Temper-brittleness mass effect, strain-ageing.

Grain, growth and recrystallisation ageing. Heat treatment plan and equipment

### Technology of Working Processes—

(a) Hot stamping and forging. Variation in procedure for different materials. Effect on physical properties and structure. Flow of metal during process. Correct and incorrect fibre direction; evidence of marco-section.

(b) Press work. Suitability of materials. Drawing operations of varying depths and metal flow. Interstage annealing. Material inspection at various stages.

(c) Welding. The effect of electric arc and oxyacetylene processes on materials. Electrodes and fluxes. Structure of welds. Inspection of welds.

(d) Extrusion. Materials available. Type of work possible.

## 18. WORKSHOP TECHNOLOGY

*Material*.—The composition, physical property and engineering uses of the more common metals, their alloys such as cast iron, malleable iron, mild steel, medium carbon steel, phosphor bronze and light alloys etc.

Tool steels, carbon and high-speed steel, and their suitability for different kinds of tools.

*Heat-Treatment*.—The relation between the heat treatment and the physical property of plain carbon steels.

*The effect of Carbon*.—Critical temperatures. Hardening, tempering, annealing, normalizing and case hardening. Types of furnaces. Temperature measurement and Castrol Quenching media.

*Manufacturing Process*.—An outline of the preparatory processes for forming materials e.g. moulding and casting forgings, drop stamping, rolling and drawing metal bars. Dishing, drawing, pressing and extruding; brazing and soldering; welding by Arc, and welding and cutting by acetylene gas blow pipe flame.

*Measuring, Gauging and Inspection*.—General Principle of interchangeable production and limit gauging.

*Standards*.—Systems of limits and fits for plain and screwed work. Tolerances limits; clearance, interference. Tolerances associated with different machining operations.

*Type of Limit Gauges*.—Advantages of adjustable gauges.

*Measuring equipment*.—Use of surface of plates, squares, micrometers, vernier calipers and height gauges, dial gauges, rules protractors. Conversion factor. Standard workshop gauges, their accuracies and uses.

*Cutting Tools*.—Cutting action of tools such as hand tools, lathe tools, drills reamers, milling cutters, dies, taps etc. Angles of tools for cutting different materials and purposes. Measurement of tool angles. Cutting speeds and feeds. Estimating machining times.

*Machine Tools*.—Fundamental principles in the production of machine surfaces. Principal features of construction and function of general purpose machines such as lathes, sensitive drills radial and vertical drilling machines, shaping, slotting, planning and boring machines; plan milling machines, capstan and turret lathes, grinding and lapping machines.

*Lubrication*.—Types and uses of cutting solutions. Selection and methods of application.

*Operation Planning*.—Planning the operation layout for production and estimation of floor to floor times for machined parts.

## 19. WORKSHOP ORGANISATION AND MANAGEMENT

*Factory Organisation*.—Essentials for a sound system of works organisation. Division of managerial duties. Cost Section. Administrative Division. Technical Division. Works Manager's departments.

*Place of the Foreman in Works Organisation*.—Choice of Foreman; duties of foreman; maintenance of discipline, supervision and instructions. Attitude towards workers, care of materials, tools and equipment, analytical study of machines, men and methods; records maintenance; bonus to foreman.

*Workers and working conditions*.—The problem of incentives, fair and adequate wages, satisfactory working conditions, fair and sympathetic treatment. Suggestions from employees: day wage system; piece work system; premium or bonus system; profit sharing scheme; what is a fair day's wage; higher wages must result in greater output. Problem of factory discipline: proper time keeping; check on absenteeism; check on loitering. Workers rules and regulations. Efficiency records. Works Committee. Duties and responsibilities of employers and labour. Labour relations.

*Stores Organisation*.—Functions of the Stores Department. Efficient handling and control of stores. Material issue requisitions; record of material issued. Bin cards; Stores record cards; Duties of Stores Accountants; materials returned from job. Advantages of good store keeping and store recording.

*Labour Organisation*.—Training of employees; recording of time and performance; time recording metal discs; mechanical time recorder; job cards, piece work cards; piece work rules.

overtime slips; pass out slips; preparation of wages sheets and payment of wages for overtime; transfer from one department to another; fines; Works Committees.

**Method of remunerating Labour.**—Time and day rate system; piece work method; combination of day rate and piece work; bonus methods; high wage plan; collective bonus plans; profit sharing scheme; essential factors for wages as an incentive to efficiency.

**Production Organisation.**—The Works Planning Department and Progress Department; estimating department; inspection departments and duties of inspection department. Budget control; statistical reports; standardisation and mass production internal transport; tool service, maintenance service, drawing and design service.

**Labour Welfare.**—Labour welfare activities; hours of work and adequate wages; accident, safety protections; shops cleanliness and sanitation; lighting and ventilation; factory discontent; transport to and from factory; educational facilities; canteen and mess facilities; medical aid; amenities for sports and games; works library.

**Maintenance of rigid discipline.**—

**Cost Accounting and Cost Control.**—Main elements of costs; material and labour expenses; item usually included in work on cost; office on cost; duties of the cost office; ascertaining of prime cost of articles; methods of record and internal check, work orders; stock orders; pending orders, charging direct materials cost; materials issue requisitions; return of materials to stores; transfer of materials from one job to another; material issue, wages etc.; detailed consideration of on cost items. Allocation and distribution of expenses; method of recording works expenses in cost and cost records.

## 20. APPLIED ELECTRONIC CIRCUITS

Circuit principles involved in the following :—

Vacuum tube amplifiers, typical circuits for different applications; feed back; broadband amplifiers; D. C. amplifiers.

Transistor amplifiers, typical circuits; design for temperature stabilisation.

Low and high frequency oscillators. Conventional circuits, relaxation oscillators; frequency multipliers and dividers; frequency stabilization.

Pulse and sweep circuits, counting circuits.

Modulators and detectors; typical circuits for amplitude, frequency and phase modulation.

Power supply systems for electronic equipments—rectifiers, filters, voltage regulated power supplies.

Industrial electronic circuits for induction heating, welding and speed control of electric meters.

Typical circuits used in television receivers.

## APPENDIX III

### REGULATIONS RELATING TO THE PHYSICAL EXAMINATION OF CANDIDATES

(These regulations are published for the convenience of candidates and in order to enable them to ascertain the probability of their coming up to the required physical standard. But it must be clearly understood that the Government of India reserve to themselves an absolute discretion to reject as unfit any candidate whom they may consider, on the report of the Medical Board, to be physically disqualified and that their discretion is in no respect limited by these regulations. These regulations are intended merely for the guidance of Medical Examiners and are not meant to restrict their discretion in any way.)

1. To be passed as fit for appointment a candidate must be in good mental and bodily health and free from any physical defect likely to interfere with the efficient performance of the duties of his appointment.

2. (a) In the matter of the correlation of age, height and chest girth of candidates of Indian (including Anglo-Indian) race, it is left to Medical Board, to use whatever correlation figures are considered most suitable as a guide in the examination of the candidates. If there be any disproportion with regard to height, weight and chest girth, the candidate should be hospitalised for investigation and X-Ray of the chest taken before the candidate is declared fit or not fit by the Board.

(b) However, for certain Services the minimum standards for height and chest girth, without which candidates cannot be accepted, are as follows :—

	Height	Chest girth (fully expanded)	Expansion
Railway Engineering Service, Civil, Electrical, Mechanical and Signal	152 cm.	84 cm.	5 cm.

The minimum height prescribed is relaxable in case of candidates belonging to races such as Gorkhas, Garhwalis, Assamese, Tribals, etc., whose average height is distinctly lower.

(c) For the Military Engineer Services, Class I and the Indian Ordnance Factories Service, Class I, a minimum expansion of 5 centimetres will be required in the matter of measurement of the chest.

3. The candidate's height will be measured as follows :—

He will remove his shoes and be placed against the standard with his feet together and the weight thrown on the heels and not on the toes or other sides of the feet. He will stand erect without rigidity and with the heels, calves, buttocks and shoulders touching the standard; the chin will be depressed to bring the vertex of the head level under the horizontal bar and the height will be recorded in centimetres and parts of a centimetre to halves.

4. The candidate's chest will be measured as follows :—

He will be made to stand erect with his feet together and to raise his arms over his head. The tape will be so adjusted round the chest that its upper edge touches the inferior angles of the shoulder blades behind and lies in the same horizontal plane when the tape is taken round the chest. The arms will then be lowered to hang loosely by the side, and care will be taken that the shoulders are not thrown upwards or backwards so as to displace the tape. The candidate will then be directed to take a deep inspiration several times and the maximum expansion of the chest will be carefully noted, and the minimum and maximum will then be recorded in centimetres, 84—89, 86—93.5, etc. In recording the measurements, fractions of less than half a centimetre should not be noted.

5. The candidate will also be weighed and his weight recorded in kilograms; fractions of half a kilogram should not be noted.

6. The candidate's eye-sight will be tested in accordance with the following rules. The result of each test will be recorded :—

(i) **General.**—The candidate's eyes will be submitted to a general examination directed to the detection of any disease or abnormality. The candidate will be rejected if he suffers from any squint or morbid conditions of eyes, eye-lids or contiguous structures of such a sort as to render or are likely at future date to render him unfit for service.

(ii) **Visual Acuity.**—The examination for determining the acuteness of vision includes two tests, one for distant, the other for near vision. Each eye will be examined separately.

There shall be no limit for minimum naked eye vision but the naked eye vision of the candidates shall, however, be recorded by the Medical Board or other medical authority in every case, as it will furnish the basic information in regard to the condition of the eye.

The standards for distant and near vision with or without glasses shall be as follows :—

	Distant vision		Near vision	
	Better eye	Worse eye	Better eye	Worse eye
1. Railway Engineering Service (Civil, Electrical, Mechanical and Signal), and other services.	6/9 6/6	6/9 or 6/12	0.6	0.8
2. Central Engineering Services Class I & II, Central Electrical Engineering Services, Class I and Class II, Central Engineering Service (Roads), Class I, and Indian Supply Service, Class I.	6/9 6/6	6/9 or 6/12	0.6	0.8
3. Military Engineer Services, Class I and Indian Ordnance Factories Service, Class I.	6/6 (corrected with glasses)	6/18	0.8	1.0
4. Telegraph Engineering Service (Class I), Stores Department of the Superior Revenue Establishment of Indian Railways	6/9 6/6	6/9 or 6/12	0.6	0.8

NOTE (1).—In respect of Services mentioned at 1, 2 and 3 above.

Total amount of Myopia (including the cylinder) shall not exceed —4.00D. Total amount of Hypermetropia (including the cylinder) shall not exceed +4.00D.

NOTE (2).—In respect of Services mentioned at 4 above.

(a) For candidates upto the age of 20 years.—Total amount of Myopia shall not exceed —6.OOD. Total amount of hypermetropia shall not exceed +6.OOD.

(b) For candidates above the age of 20 years.—Total amount of Myopia shall not exceed —8.OOD. Total hypermetropia shall not exceed +6.OOD.

NOTE (3).—Fundus Examination.—Wherever possible fundus examination will be carried out at the discretion of the Medical Board and results recorded.

NOTE (4).—Colour Vision.—(i) The testing of colour vision shall be essential in respect of Services mentioned at 1, 2 and 3 above.

(ii) Colour perception should be graded into a higher and a lower grade depending upon the size of the aperture in the lantern as described in the table below :—

Grade	Higher Grade of colour perception	Lower Grade of Colour perception
1. Distance between the lamp and candidates . . . . .	4.9 metres	4.9 metres
2. Size of aperture . . . . .	1.3 mm	13 mm
3. Time of exposure . . . . .	5 sec.	5 sec.

For the Services concerned with the safety of the Public, e.g. pilots, drivers, guards, etc., the higher grade of colour vision is essential but for other the lower grade of colour vision should be considered sufficient. The same standards of colour vision should be applicable in respect of all Engineering personnel in whose case colour perception is considered essential irrespective of the fact whether their duties involve field work or not.

(iii) Satisfactory colour vision constitutes recognition with ease and without hesitation of signal red, signal green and white colours. The use of Ishihara's plates, shown in good light and a suitable lantern like Edrige Green's shall be considered quite dependable for testing colour vision. While either of the two tests may ordinarily be considered sufficient, in respect of the Services concerned with road, rail and air traffic, it is essential to carry out the lantern test. In doubtful cases where a candidate fails to qualify when tested by only one of the two tests, both the tests should be employed.

NOTE (5).—Field of vision.—The field of vision shall be tested in respect of all Services by the confrontation method. Where such test gives unsatisfactory or doubtful results the field of vision should be determined on the perimeter.

NOTE (6).—Night Blindness.—Night blindness need not be tested as a routine, but only in special cases. No standard test for the testing of night blindness or dark adaptation is prescribed. The Medical Board should be given the discretion to improvise such rough tests e.g. recording of visual acuity with reduced illumination or by making the candidate recognise various objects in a darkened room after he/she has been there for 20 to 30 minutes. Candidates' own statements should not always be relied upon, but they should be given due consideration.

NOTE (7).—Ocular conditions other than visual acuity.—(a) Any organic disease or a progressive refractive error which is likely to result in lowering the visual acuity should be considered as a disqualification.

(b) Trachoma.—Trachoma, unless complicated shall not ordinarily be a cause for disqualification.

(c) Squint.—For Services mentioned at 1, 2 and 3 above where the presence of binocular vision is essential, squint, even if the visual acuity is of the prescribed standard should be considered as a disqualification. For other Services the presence of squint should not be considered as a disqualification if the visual acuity is of the prescribed standard.

(d) One-eyed person.—The employment of one-eyed individuals is not recommended.

#### 7. Blood Pressure.

The Board will use its discretion regarding Blood Pressure. A rough method of calculating normal maximum systolic pressure is as follows :—

(i) With young subjects 15—25 years of age the average is about 100 plus the age.

(ii) With subjects over 25 years of age the general rule of 110 plus half the age seems quite satisfactory.

N.B.—As a general rule any systolic pressure over 140 and diastolic over 90 should be regarded as suspicious and the candidate should be hospitalised by the Board before giving their final opinion regarding the candidate's fitness or otherwise. The hospitalization report should indicate whether the rise in blood pressure is of a transient nature due to excitement etc., or whether it is due to any organic disease. In all such cases X-Ray and electrocardiographic examinations of heart and blood urea clearance test should also be done as a routine. The final decision as to the fitness or otherwise of a candidate will, however, rest with the Medical Board only.

#### Method of taking Blood Pressure.

The mercury manometer type of instrument should be used as a rule. The measurement should not be taken within fifteen minutes of any exercise or excitement. Provided the patient and particularly his arm is relaxed, he may be either lying or sitting. The arm is supported comfortably at the patient's side in a more or less horizontal position. The arm should be freed from clothes to the shoulder. The cuff completely deflated, should be applied with the middle of the rubber over the inner side of the arm, and its lower edge an inch or two above the bend of the elbow. The following turns of cloth bandage should spread evenly over the bag to avoid bulking during inflation.

The brachial artery is located by palpitation at the bend of the elbow and the stethoscope is then applied lightly and centrally over it below, but not in contact with the cuff. The cuff is inflated to about 200 mm. Hg. and then slowly deflated. The level at which the column stands when soft successive sounds are heard represents the Systolic Pressure. When more air is allowed to escape the sounds will be heard to increase in intensity. The level at which the well-heard clear sounds change to soft muffled fading sounds represents the diastolic pressure. The measurements should be taken in a fairly brief period of time as prolonged pressure of the cuff is irritating to the patient and will vitiate the readings. Rechecking if necessary, should be done only a few minutes after complete deflation of the cuff. (Sometimes, as the cuff is deflated sounds are heard at a certain level; they may disappear as pressure falls and reappear at a still lower level. This 'Silent Gap' may cause error in reading).

8. The urine (passed in the presence of the examiner) should be examined and the result recorded. Where a Medical Board finds sugar present in a candidate's urine by the usual chemical tests, the Board will proceed with the examination with all its other aspects and will also specially note any signs or symptoms suggestive of diabetes. If, except for the glycosuria the Board finds the candidate conforms to the standard of medical fitness required they may pass the candidate "fit subject to the Glycosuria being non-diabetic" and the Board will refer the case to a specified specialist in Medicine who has hospital and laboratory facilities at his disposal. The Medical Specialist will carry out whatever examinations, clinical and laboratory, he considers necessary including a standard blood sugar tolerance test and will submit his opinion to the Medical Board, upon which the Medical Board will base its final opinion "fit" or "unfit". The candidate will not be required to appear in person before the Board on the second occasion. To exclude the effects of medication it may be necessary to retain a candidate for several days in hospital, under strict supervision.

9. The following additional points should be observed :—

- that the candidate's hearing in each ear is good and that there is no sign of disease of the ear. In case it is defective the candidate should be got examined by the ear specialist. Provided that if the defect in hearing is remediable by operation or by use of a hearing aid, a candidate cannot be declared unfit on that account provided he/she has no progressive disease in the ear. This provision is not applicable in the case of Railway Services;
- that his/her speech is without impediment;
- that his/her teeth are in good order and that he/she is provided with dentures where necessary for effective mastication (well filled teeth will be considered as sound);
- that the chest is well formed and his chest expansion sufficient; and that his heart and lungs are sound;
- that there is no evidence of any abdominal disease;
- that he is not ruptured;
- that he does not suffer from hydrocele, a severe degree of varicocele, varicose veins or piles;
- that his limbs, hands and feet are well formed and developed and that there is free and perfect motion of all his joints;
- that he does not suffer from any inveterate skin disease;
- that there is no congenital malformation or defect;
- that he does not bear traces of acute or chronic disease pointing to an impaired constitution;
- that he bears marks of efficient vaccination; and
- that he is free from communicable disease.

10. Radiographic examination of the chest should be done as a routine in all cases for detecting any abnormality of the heart and lungs which may not be apparent by ordinary physical examination.

When any defect is found it must be noted in the Certificate and the medical examiner should state his opinion whether or not it is likely to interfere with the efficient performance of the duties which will be required of the candidate.

NOTE.—Candidates are warned that there is no right of appeal from a Medical Board, special or standing appointed to determine their fitness for the above Services. If, however, Government are satisfied on the evidence produced before





Acuity of vision	Nacked eye	With glasses	Strength of glasses		
			Sph.	Cyl.	Axis
Distant vision R.E. L.E.					
Near vision R.E. L.E.					
Hypermetropia R.E. (Manifest) L.E.					

4. Ears : Inspection ..... Hearing. Right Ear  
..... Left Ear .....

5. Glands ..... Thyroid .....

6. Condition of teeth.....

7. Respiratory System : Does physical examination reveal anything abnormal in the respiratory organs.....

.....

.....

If yes, explain fully.....

8. Circulatory System :

(a) Heart : Any organic lesions ?

Rate ..... Standing .....

After hopping 25 times .....

Two minutes after hopping .....

(b) Blood Pressure : Systolic .....

Diastolic.....

9. Abdomen : Girth ..... Tenderness

Hernia.....

(a) Palpable : Liver ..... Spleen .....

..... Kidneys ..... Tumours .....

(b) Haemorrhoids ..... Fistula .....

10. Nervous System : Indications of nervous or mental disabilities.....

11. Loco-Motor System : Any abnormality .....

12. Genito Urinary System : Any evidence of Hydrocele, Varicocele, etc., Urine Analysis :

(a) Physical appearance ..... (b) Sp. Gr.....

(c) Albumen ..... (d) Sugar .....

(e) Casts ..... (f) Cells .....

13. Report of X-Ray Examination of Chest.....

14. Is there anything in the health of the candidate likely to render him unfit for the efficient discharge of his duties in the service for which he is a candidate ?

15. For which Services has the candidate been examined and found in all respects qualified for the efficient and continuous discharge of his duties and for which of them is he considered unfit ?

16. Is the candidate fit for Field Service ?

Note :—The Board should record their findings under one of the following three categories :

(i) Fit

(ii) Unfit on account of .....

(iii) Temporarily unfit on account of .....

President.....

Member.....

Place.....

Date.....

#### APPENDIX IV

Brief particulars relating to the Services/Posts, to which recruitment is being made on the results of this examination.

1. Indian Railway Service of Engineers, the Electrical Engineering Department of the Superior Revenue Establishment of the Indian Railways, the Signal Engineering Department of the Superior Revenue Establishment of the Indian Railways and the Mechanical Engineering and Transportation (Power) Department of the Superior Revenue Establishment of the Indian Railways.

(1) Appointments will be on probation for a period of three years during which the service of the officers will be liable to termination by three months' notice on either side. Probationary Officers will be required to undergo practical training for the first two years. Those who complete this training successfully and are otherwise considered suitable will be placed in charge of a working post, provided they have passed the prescribed departmental and other examinations. It must be noted that these examinations should, as a rule, be passed at the first chance and that save under exceptional circumstances, a second chance will not be allowed. Failure to pass any of the examinations may result in the termination of the service and will in any case involve stoppage of increments.

At the end of one year in a working post, the probationary officers will be required to pass a final examination, both practical and theoretical and will, as a rule, be confirmed if they are considered fit for appointment in all respects. In cases where the probationary period is extended for any reason, the drawal of the first and subsequent increments on their passing the departmental examinations, and on being confirmed, will be subject to the rules and orders in force from time to time.

On appointment a probationer shall execute an agreement binding himself and one surety jointly and severally to refund in the event of his failing to complete the probation to the satisfaction of the Central Government any moneys paid to him consequent on his appointment as Probationer.

If for any reasons not beyond his control, a probationer wishes to withdraw from training or probation, he will be liable to refund the whole cost of his training and any other moneys paid to him during the period of his probation.

Note (i).—The period of training and the period of probation against a working post may be modified at the discretion of Government. If the period of training is extended in any case due to the training not having been completed satisfactorily, the total period of probation will be correspondingly extended.

Note (ii).—Probationers will also have to undergo training at the Railway Staff College, Baroda. The test in the Staff College is compulsory and a second chance in the event of failure, will not be given except in exceptional circumstances and provided the record of the Officer is such that such a relaxation may be made. Failure to pass the test may involve the termination of service and in any case the officers will not be confirmed till they pass the tests, their period of training and/or probation being extended as necessary.

NOTE (iii).—In the Signal Engineering Department, on Railways where there are specialised Tele-Communications posts, an additional training for a period of six months in Tele-Communications may be arranged in any particular cases.

(2) (a) Probationers will not be permitted to apply for appointment elsewhere or appear for examination or selection for recruitment to other services.

(b) In cases where Probationers have already appeared at the Combined Competitive Examinations prior to their allotment to the Railway Service and qualify for appointment to services other than the Railway Services, the question of their release from Railway Service will be considered only when they are prepared to refund in cash the cost of their training and other moneys paid to them during the period of their probation before they are actually relieved.

(3) Probationers should have already passed or should pass during the period of probation an examination in Hindi in the Dev Nagri script of an approved standard. This examination may be the "PRAVEEN" Hindi Examination which is conducted by the Directorate of Education, Delhi Administration, or one of the equivalent Examinations recognised by the Central Government.

No probationary officer can be confirmed or his pay in the time scale raised to Rs. 450.00 per month unless he fulfils this requirements; and failure to do so will involve liability to termination of service. No exemption can be granted.

(4) Officers recruited under these rules :—

(a) will be eligible to pensionary benefits; and

(b) shall subscribe to the State Railway (non-contributory) Provident Fund under the Rules of that Fund.

as applicable to railway servants.

(5) Pay will commence from the date of joining service. Service for increments will also count from the same date. Particulars as to pay are contained in sub-para (9).

(6) Officers recruited under these rules shall be eligible for leave in accordance with the rules for the time being in force as applicable to officers of Indian Railways. The Leave Rules are, however, liable to revision in the light of the Pay Commission's recommendations. They will not be permitted to retain the present leave Rules, if so decided by the Government.

(7) Officers will ordinarily be employed throughout their service on the Railway to which they may be posted on first appointment and will have no claim, as a matter of right, to transfer to some other Railway. But the Government reserve the right to transfer such officers, in the exigencies of service, to any other Railway or project in or out of India. Officers will be liable to serve in the Stores Department of Indian Railways if and when called upon to do so.

(8) The relative seniority of officers appointed under these rules will ordinarily be determined by their order of merit in the competitive examination. The Government of India, however, reserve the right of fixing seniority at their discretion in individual cases. They also reserve the right of assigning to officers appointed otherwise than by a competitive examination positions in the seniority list at their discretion.

NOTE.—If the period of training and consequently the period of probation is extended in any particular case due to the training not having been completed satisfactorily the officer concerned is liable to lose in seniority.

(9) The following are the rates of pay admissible :—

Junior Scale : Rs. 400—400—450—30—600—35—670—EB—35—950.

Senior Scale : Rs. 700—(6th year and under)—40—1,100—50/2—1,250.

Junior Administrative Grade : Rs. 1,300—60—1,600.

Senior Administrative Grade :—

Indian Railway Service of Engineers & Mechanical Engineering & Transportation (Power) Department  
Rs. 1,800—100—2,000—125—2,250.

Signal Engineering Department and Electrical Engineering Department Rs. 1,800—100—2,000.

NOTE (1)—Probationary officers will start on the minimum of the junior scale and will count their service for increment from the date of joining. They will, however, be required to pass any departmental examination or examinations that may be prescribed before their pay can be raised from Rs. 400.00 to Rs. 450.00 P.M. in the time scale.

Increment from Rs. 400.00 to Rs. 450.00 will not be granted if they fail to pass the Departmental examination within the first two years of the training and probationary period. In cases where the training period has to be extended for failing to pass all the Departmental Examinations within the stipulated period, on their passing the departmental examinations after expiry of the extended period of training their pay from the date following that on which the last examination ends, will be fixed at the stage in the time scale which they would have otherwise attained but no arrears of pay would be allowed to them. In such cases the date of future increments will not be affected.

The increments from Rs. 400.00 to Rs. 450.00 and from Rs. 450.00 to Rs. 480.00 may however, be granted in advance during the period of probation, if the probationary officer passes the first and second departmental examinations respectively in accordance with extant instructions.

NOTE (ii).—In the case of persons already in Government Service, their pay on appointment as probationer will be fixed in accordance with the rules and regulations in force from time to time.

(10) The increments will be given subject to sub-para to Note (i) under sub-para (9) above for approved service only, and in accordance with the rules of the Department.

(11) Any person appointed on the results of this competitive examination shall, if so required, be liable to serve in any Defence Service or post connected with the Defence of India, for a period of not less than four years including the period spent on training, if any;

Provided that such person—

(a) shall not be required to serve as aforesaid after the expiry of ten years from the date of appointment;

(b) shall not ordinarily be required to serve as aforesaid after attaining the age of forty years.

(12) Promotions to the administrative grades are dependent on the occurrence of vacancies in the sanctioned establishment and are made wholly by selection, mere seniority does not confer any claim for such promotion.

(13) In all matters not specifically provided for herein, the probationary officers will be governed by the provisions, of the Indian Railway Codes as amended from time to time and other orders in force issued by competent authorities.

**2. Central Engineering Service, Class I, Central Engineering Service, Class II (Permanent), Central Electrical Engineering Service, Class I and Central Electrical Engineering Service, Class II (permanent).**

(a) The selected candidates will be appointed on probation for two years. On completion of the period of probation, if they have passed the prescribed departmental examinations

and are considered fit for permanent appointment, they will be confirmed in their appointments. Government may extend the period of probation of two years.

If on the expiration of the period of probation or of any extension thereof, Government are of opinion that the officer is not fit for permanent employment or if at any time during such period of probation or extension, they are satisfied that the officer will not be fit for permanent appointment on the expiration of such period or extension, they may discharge the officer or pass such order as they think fit.

Probationers will also be required to pass a test in Hindi before confirmation.

(b) Any person appointed on the results of this competitive examination shall, if so required, be liable to serve in any Defence Service or post connected with the Defence of India, for a period of not less than four years including the period spent on training, if any;

Provided that such person—

(a) shall not be required to serve as aforesaid after the expiry of ten years from the date of appointment;

(b) shall not ordinarily be required to serve as aforesaid after attaining the age of forty years.

(c) The following are the rates of pay admissible :

Central Engineering Service, Class I and Central Electrical Engineering Service, Class I :—

Junior Scale : Rs. 400—400—450—30—600—35—670—EB—35—950.

Senior Scale : Rs. 700—40—1,100—50/2—1,250.

Administrative (Selection) Posts :

Superintending Engineers : Rs. 1,300—60—1,600—100—1,800.

Additional Chief Engineers : Rs. 2,000/- fixed (For Central Engineering Service, Class I only).

Chief Engineer : Rs. 2,250/- fixed (For Central Engineering Service, Class I only).

Central Engineering Service, Class II and Central Electrical Engineering Service, Class II.

Rs. 350—25—500—30—590—EB—30—800—EB—30—830—35—900.

### 3. Indian Supply Service.

(a) Selected candidates will be appointed on probation for a period of two years. On completion of the period of probation, the officers, if considered fit for permanent appointment will be confirmed in their appointments subject to availability of permanent posts. The Government may extend the period of two years of probation.

If on the expiration of the period of probation or any extension thereof, the Government are of the opinion that an officer is not fit for permanent employment, or if at any time during such period of probation or extension thereof, they are satisfied that any officer will not be fit for permanent appointment on the expiration of such period or extension they may discharge the officer or pass such order as they think fit.

The officers will also be required to pass a prescribed test in Hindi before confirmation.

(b) Any person appointed on the results of this competitive examination shall, if so required, be liable to serve in any Defence Service or post connected with the Defence of India, for a period of not less than four years including the period spent on training, if any :—

Provided that such person—

(a) shall not be required to serve as aforesaid after the expiry of ten years from the date of appointment;

(b) shall not ordinarily be required to serve as aforesaid after attaining the age of forty years.

(c) The following are the rates of pay admissible.

	Rs.
Grade III, Junior Class I Scale	400—400—450—30—600—35—670—EB—35—950
Grade II—Senior Class I Scale	700—40—1,100—50/2—1,250
Grade I—Administrative Selection Posts	1,300—60—1,600
Super time-scale posts	(a) 1800—100—2,000 (b) 2,250

### 4. Military Engineer Services, Class I.

(a) The selected candidates will be appointed on probation for a period of two years. A probationer during his probationary period may be required to pass such departmental and language tests as Government may prescribe. If, in the opinion of Government, the work or conduct of an officer on probation is unsatisfactory or shows that he is



unlikely to become efficient or if the probationer fails to pass the prescribed tests during the period, Government may discharge him. On the conclusion of the period of probation, Government may confirm the officer in his appointment or if his work or conduct has in the opinion of Government been unsatisfactory, Government may either discharge him or extend the period of probation for such further periods as Government may consider fit.

Probationers will also be required to pass a test in Hindi before confirmation.

- (b) (i) The selected candidates shall, if so required, be liable to serve as Commissioned Officers in the Armed Forces for a period of not less than four years including the period spent on training if any; provided that such a candidate (i) shall not be required to serve as aforesaid after the expiry of ten years from the date of appointment; and (ii) shall not ordinarily be required to serve as aforesaid after attaining the age of forty years.

- (ii) The candidate shall also be subject to Civilians in Defence Services (Field Service Liability) Rules of 1957 published under S.R.O. No. 92 dated 9th March, 1957. They will be medically examined in accordance with the medical standards laid down therein.

- (c) The following are the rates of pay admissible :—

	Rs.
Assistant Executive Engineer . . . . .	400—400—450—30—
Assistant Surveyor of Works . . . . .	600—35—670—EB
Assistant Technical Examiner . . . . .	35—950.
Executive Engineer . . . . .	700—40—1,100—
Surveyor of Works . . . . .	50/2—1,250.
Technical Examiner . . . . .	
Superintending Engineer . . . . .	1,300—60—1,600—100
Superintending Surveyor of Works . . . . .	—1,800
Superintending Technical Examiner . . . . .	
Chief Technical Examiner . . . . .	Under Consideration
Chief Surveyor of Works . . . . .	1,800—100—2,000.

#### 5. Indian Ordnance Factories Service, Class I.

(a) Selected candidates will be appointed as Assistant Managers (Probationers). The period of probation will be three years. The period of probation may be reduced or extended by the Government on the recommendation of the Director General, Ordnance Factories. An Assistant Manager (Probationer) will undergo such practical training as shall be provided by Government and may be required to pass such departmental and language tests as Government may prescribe. The language tests will include a test in Hindi.

On the conclusion of his period of probation, Government will confirm the officer in his appointment. If, however, during or at the end of the period of probation his work or conduct has in the opinion of Government been unsatisfactory, Government may either discharge him or extend his period of probation for such period as Government may think fit.

(b) (i) Selected candidates shall, if so required, be liable to serve as Commissioned Officers in the Armed Forces for a period of not less than four years including the period spent on training if any; provided that such person (i) shall not be required to serve as aforesaid after the expiry of ten years from the date of appointment and (ii) shall not ordinarily be required to serve as aforesaid after attaining the age of forty years.

(ii) The candidates shall also be subject to Civilians in Defence Services (Field Service Liability) Rules 1957, published under S.R.O. No. 92 dated 9th March, 1957. They will be medically examined in accordance with the medical standards laid down therein.

- (c) The following are the rates of pay admissible :—

	Rs.
	Junior Scale :
Assistant Manager . . . . .	400—400—450—30—
Technical Staff Officer . . . . .	600—35—670—EB
	—35—950.
Deputy Manager/Deputy Assistant Director General Ordnance Factories . . . . .	Senior Scale :
	700—40—1,100—50/2
	—1,250
Manager/Senior Deputy Assistant Director General, Ordnance Factories . . . . .	1,100—50—1,400
Deputy General Manager/General Manager, Grade II/Assistant Director General Ordnance Factories, Gr. II . . . . .	1,300—60—1,600

General Manager, Grade I/Assistant Director General, Ordnance Factories Grade I . . . . .	1,600—100—1,800
General Manager (Selection Grade/Deputy Director General, Ordnance Factories . . . . .	1,800—100—2,000
Additional Director General, Ordnance Factories . . . . .	2,250—125—2,500
Director General Ordnance Factories . . . . .	Not yet fixed.

#### 6. Telegraph Engineering Service, Class I.

(a) Appointments will be made on probation for a period of two years. If, in the opinion of Government, the work or conduct of an officer on probation is unsatisfactory, or shows that he is unlikely to become efficient, Government may discharge him forthwith. On the conclusion of his period of probation, Government may confirm the officer in his appointment if permanent vacancies are available or if his work or conduct has in the opinion of the Government been unsatisfactory, Government may either discharge him from the service or may extend his period of probation for such further period as the Government may think fit.

Officers will be required to pass any departmental examination or examinations that may be prescribed during the period of probation. They will also be required to pass a test in Hindi before confirmation.

- (b) Officers will also be required to pass professional and language Tests.

(c) Any person appointed on the results of this competitive examination shall, if so required, be liable to serve in any Defence Service or post connected with the Defence of India, for a period of not less than four years including the period spent on training, if any;

Provided that such person—

- (a) shall not be required to serve as aforesaid after the expiry of ten years from the date of appointment;

- (b) shall not ordinarily be required to serve as aforesaid after attaining the age of forty years.

- (d) The following are the rates of pay admissible.

Junior Scale:—Rs. 400—400—450—30—600—35—670—EB—35—950.

Senior Scale:—Rs. 700—40—1,100—50/2—1,250.

Junior Administrative Grade:—Rs. 1,300—60—1,600.

Senior Administrative Grade:—Rs. 1,800—100—2,000.

Members (P & T Board) :—Rs. 2,250.

#### 7. Central Engineering Service (Roads), Class I.

(a) The selected candidates will be appointed as Assistant Engineer Consultant on probation for two years. On the completion of the period of probation, if they are considered fit for permanent appointment, they will be confirmed as Assistant Engineer Consultant if permanent vacancies are available. The Government may extend the period of probation of two years.

If on the expiration of the period of probation or of any extension thereof, Government are of the opinion that an Assistant Engineer Consultant is not fit for permanent employment or if at any time during such period of probation or extension they are satisfied that an Assistant Engineer Consultant will not be fit for permanent appointment on the expiration of such period or extension, they may discharge the Assistant Engineer Consultant or pass such order as they think fit.

The officers will also be required to pass a test in Hindi before confirmation.

(b) Any person appointed on the results of this competitive examination shall, if so required, be liable to serve in any Defence Service or post connected with the Defence of India, for a period of not less than four years including the period spent on training, if any;

Provided that such person—

- (a) shall not be required to serve as aforesaid after the expiry of ten years from the date of appointment;

- (b) shall not ordinarily be required to serve as aforesaid after attaining the age of forty years.

- (c) The following are the rates of pay admissible;

Junior Class I posts (Assistant Engineer Consultant)—Rs. 400—400—450—30—600—35—670—EB—35—950.

Senior Class I (Selection) Post (Divisional Engineer Consultant).—Rs. 700—40—1,100—50/2—1,250.

Administrative (Selection) Class I Posts: Planning Officer:—Rs. 1,300—60—1,600.

Deputy Bridges Officer :—Rs. 1,300—60—1,600.  
 Deputy Standards Officer :—Rs. 1,300—60—1,600.  
 Deputy Materials and Plant Officer :—Rs. 1,300—60—1,600.  
 Senior Planning Officer :—Rs. 1,600—100—1,800.  
 Deputy Consulting Engineer (Roads) :—Rs. 1,600—100—1,800.

(Posts carrying the same scales of pay are inter-changeable except that of Deputy Materials and Plant Officer).

#### Higher Administrative (Selection) Class I Posts :

Additional Consulting Engineering (Bridges) :—Rs. 1,800—100—2,000.

Additional Consulting Engineer (Roads) :—Rs. 1,800—100—2,000.

Consulting Engineer (Road Development) :—The prescribed scale for the post is under consideration.

#### 8. Posts of Assistant Drilling Engineer, GSI (Class I).

Persons recruited to the posts of Assistant Drilling Engineer, GSI in a temporary capacity will be on probation for a period of 2 years. Retention in service for a further period over 2 years will depend on assessment of their work during the period of probation. This period may be extended at the discretion of the Govt. They will receive pay in the time-scale of Rs. 400-400-450-30-600-35-670-EB-35-950 (Revised). On completion of their period of probation satisfactorily, if they are considered fit for permanent appointment, they will be considered for confirmation according to rules subject to the availability of substantive vacancies.

The persons appointed to the posts of Assistant Drilling Engineer, GSI, if so required, will be liable to serve in any Defence Service or post connected with the Defence of India for a period of not less than four years including the period of training, if any;

Provided that such a person—

- shall not be required to serve as aforesaid after the expiry of ten years from the date of appointment as Assistant Drilling Engineer, GSI; and
- shall not ordinarily be required to serve as aforesaid after attaining the age of forty years.

The following is the field of promotion open to those found fit according to the rules and instructions on the subject.

#### Posts & Scale of pay

- Deputy Drilling Engineer :—700—40—1,100—50/2—1,250.
- Drilling Engineer :—1,300—60—1,600.
- Chief Drilling Engineer :—1,600—100—1,800.

The officers recruited to the G.S.I. will be required to serve anywhere in India or outside the country.

#### 9. Posts Assistant Director/Assistant Executive Engineer/Research Officer :—

Persons recruited to the posts of Assistant Director/Assistant Executive Engineer/Research Officer in Central Water and Power Commission shall be on probation for a period of two years.

Any person appointed on the results of this competitive examination shall, if so required, be liable to serve in any Defence Service or post connected with the Defence of India, for a period of not less than four years including the period spent on training, if any;

Provided that such person—

- shall not be required to serve as aforesaid after the expiry of ten years from the date of appointment;
- shall not ordinarily be required to serve as aforesaid after attaining the age of forty years.

The scales of pay for Class I engineering posts in Central Water and Power Commission are as follows :—

#### (Civil and Mechanical posts in the Water Wing)

	Rs.
1. Assistant Director/Assistant Executive Engineer/Research Officer.	400—400—450—30—600—35—670—EB—35—950
2. Deputy Director/Executive Engineer	700—40—1,100—50—1,250
3. Superintending Engineer/Director (Ordinary Grade)	1,300—60—1,600—100—1,800
4. Director (Selection Grade)	1,800—100—2,000
5. Chief Engineer	2,000 (fixed)

#### (Electrical and Mechanical posts in the Power Wing).

	Rs.
1. Assistant Director/Assistant Executive Engineer/Research Officer	400—400—450—30—600—35—670—EB—35—950.
2. Deputy Director/Executive Engineer	700—40—1,100—50/2—1,250.
3. Superintending Engineer/Director (Ordinary Grade)	1,300—60—1,600—100—1,800
4. Director (Selection Grade)	1,800—100—2,000
5. Deputy Chief Engineer	1,800—100—2,000
6. Chief Engineer	2,000 (fixed)

#### 10. Post of Assistant Manager, Class I in the P. & T. Workshops Organisation.

Any person appointed on the results of this competitive examination shall, if so required, be liable to serve in any Defence Service or post connected with the Defence of India, for a period of not less than four years including the period spent on training, if any;

Provided that such person :—

- shall not be required to serve as aforesaid after the expiry of ten years from the date of appointment;
- shall not ordinarily be required to serve as aforesaid after attaining the age of forty years.

The scales of pay for engineering posts in the P. & T. Workshops Organisation are as follows :—

- Assistant Engineer :—Rs. 350—25—500—30—590—EB—50—800—EB—30—830—35—900.
- Assistant Manager :—Rs. 400—400—450—30—600—35—670—EB—35—950.
- Assistant General Manager/Senior Engineer :—Rs. 700—40—1,100—50/2—1,250.
- Deputy General Manager/Manager, Workshops :—Rs. 1,300—60—1,600.
- General Manager, P. & T. Workshops :—Rs. 1,800—100—2,000.

#### 11. Posts of Assistant Executive Engineer, Class I/Assistant Engineer, Class II in the P. & T. Civil Engineering Wing.

Any person appointed on the results of this competitive examination shall, if so required, be liable to serve in any Defence Service or post connected with the Defence of India, for a period of not less than four years including the period spent on training, if any :

Provided that such person :—

- shall not be required to serve as aforesaid after the expiry of ten years from the date of appointment;
- shall not ordinarily be required to serve as aforesaid after attaining the age of forty years.

The scales of pay for engineering posts in the P. & T. Civil Engineering Wing are as follows :—

- Assistant Engineer :—Rs. 350—25—500—30—590—EB—30—800—EB—30—830—35—900.
- Assistant Executive Engineer :—Rs. 400—400—450—30—600—35—670—EB—35—950.
- Executive Engineer :—Rs. 700—40—1,100—50/2—1,250.
- Superintending Engineer :—Rs. 1,300—60—1,600—100—1,800.
- Chief Engineer :—Rs. 2,000.

#### 12. Other permanent/temporary posts carrying generally the following Scales of pay :—

	Rs.
(i)	400—950
(ii)	350—900

Any person appointed on the results of this competitive examination shall, if so required, be liable to serve in any Defence Service or post connected with the Defence of India, for a period of not less than four years including the period spent on training, if any;

Provided that such person—

- shall not be required to serve as aforesaid after the expiry of ten years from the date of appointment;
- shall not ordinarily be required to serve as aforesaid after attaining the age of forty years.

## UNION PUBLIC SERVICE COMMISSION

## ATTESTATION FORM

*Attestation Form for Candidates competing at the Engineering Services Examination, 1965.*

The entries below should be filled in by the candidate and this form should be sent to the Secretary Union Public Service Commission, New Delhi along with the application after getting the certificate at the end signed by any one of the authorities indicated therein. Candidates *should not* send this form to their District Officer.

## WARNING

The furnishing of false information or suppression of any factual information in the Attestation Form would be a disqualification and is likely to render the candidate unfit for employment under the Government. If the fact that false information has been furnished or there has been suppression of any factual information in the Attestation Form comes to notice at any time during the service of a person, his services would be liable to be terminated.

1. Name in full (in block capitals), with <i>aliases</i> , if any.  (Please indicate if you have added or dropped at any stage, any part of your name or surname).	Surname	Name
2. Present address in full ( <i>i.e.</i> , Village, Thana and District, or House Number, Lane/Street/Road and Town).		
3. (a) Home address in full ( <i>i.e.</i> , Village, Thana and District, or House Number, Lane/Street/Road and Town and name of the District Headquarters).  (b) If originally a resident of Pakistan, the address in that country and the date of migration to Indian Union.	(a)	(b)
4. Particulars of places (with periods of residences) where you have resid- ed for more than one year at a time during the preceding five years. In case of stay abroad (including Pakistan) particulars of all places where you have resided for more than one year after attaining the age of 21, should be given.		
From	To	Residential address in full ( <i>i.e.</i> , Village, Thana and District, or House Number, Lane/Street/ Road and Town)  Name of the District Headquarters of the place mentioned in the preceding column
5. (a) Father's name in full with <i>aliases</i> if any  (b) Present postal address (if dead, give last address)  (c) Permanent home address  (d) Profession  (e) If in service, give designation and official address	(a)  (b)  (c)  (d)  (e)	
6 (i) Nationality of—  (a) Father  (b) Mother  (c) Husband/Wife  (d) Candidate  (ii) Place of birth of— Husband/Wife	(i)  (a)  (b)  (c)  (d)  (ii)  (a)  (b)  (c)	
7. (a) Exact date of birth (in Christian era)  (b) Present age  (c) Age at Matriculation	(a)  (b)  (c)	

8. (a) Place of birth, District and State in which situated.	(a)
(b) District and State to which you belong.	(b)
9. (a) Your Religion.	(a)
(b) Are you a member of a Scheduled Caste/Scheduled Tribe ? Answer 'Yes' or 'No' and if the answer is 'Yes', state the name thereof.	(b)

10. Educational qualifications showing places of education with years in Schools and Colleges since 15th year of age.

Name of School/College with full address	Date of entering	Date of leaving	Examination passed

11. If you have, at any time, been employed give details, including those of present employment, if any.

Designation of post held or description of work	Period		Full address of the office, firm or institution	Full reasons for leaving the previous service
	From	To		

12. Have you ever been prosecuted, kept under detention, or bound down/fined, convicted by a court of law of any offence or debarred/disqualified by any Public Service Commission from appearing at its examinations/selections ? Is any case pending against you in any court of law at the time of filling up this attestation form ?  If the answer is 'Yes', full particulars of the case, detention, fine, conviction, sentence, etc., should be given.	
13. Names of two responsible persons of your locality or two referees to whom you are known.	1. 2.

I certify that the foregoing information is correct and complete to the best of my knowledge and belief. I am not aware of any circumstances which might impair my fitness for employment under Government.

Signature of candidate\_\_\_\_\_

Date\_\_\_\_\_

Place\_\_\_\_\_

## IDENTITY CERTIFICATE

CERTIFICATE TO BE SIGNED BY ANY ONE OF THE FOLLOWING:—

- (i) Gazetted Officers of Central or State Government ;
- (ii) Members of Parliament or State Legislature;
- (iii) Sub-Divisional Magistrate/Officers;
- (iv) Tehsildars or Naib/Dy. Tehsildars authorised to exercise Magisterial Powers;
- (v) Principals & Head Masters of all Recognised Institutions;
- (vi) Block Development Officers;
- (vii) Postmasters; and
- (viii) Panchayat Inspectors.

Certified that I have known Shri/Shrimati/Kumar-----son/daughter/of Shri-----  
for the last-----years-----months and that to the best of my knowledge and  
belief the particulars furnished by him/her are correct.

Signature-----

(Name in block capitals) -----

Designation or  
Status and address -----

Place-----

Date-----

Candidates should not detach this Card

## UNION PUBLIC SERVICE COMMISSION

Roll No .....

Engineering Services Examination, 1965

(BLOCK CAPITALS)

To be completed by the candidate

Name .....

Address .....

.....

.....

## UNION PUBLIC SERVICE COMMISSION

Dholpur House, Shahjahan Road

New Delhi-11, the 1965.

## MEMORANDUM

The undersigned is directed to acknowledge receipt of his application for admission to the Engineering Services Examination, 1965.

2. His Roll No. is.....In all correspondence with this Office he should quote (i) the name of the Examination with month and year, (ii) his Roll No. and (iii) the Centre of Examination; otherwise his communications may not be attended to.

3. Any change in his address should be communicated to this Office at once.

4. This is merely an acknowledgement of his application. The decision of the Union Public Service Commission regarding his admission to the Examination will be communicated to him in due course.

Candidate should himself write  
his complete address on reverse.

Under Secretary,  
UNION PUBLIC SERVICE COMMISSION

[ P. T. O.

## ON INDIA GOVERNMENT SERVICE

Name .....

Address .....

From

S. S. DEVGAN,  
Under Secretary,  
UNION PUBLIC SERVICE COMMISSION,  
NEW DELHI.

## Engineering Services Examination 1965

## UNION PUBLIC SERVICE COMMISSION

## APPLICATION FORM FOR THE ENGINEERING SERVICES EXAMINATION

To be filled in in the candidate's own handwriting.

ALL ANSWERS MUST BE GIVEN IN WORDS AND NOT BY DASHES OR DOTS

Affix signed passport size  
(5 cm. x 7 cm. approx.) photo-  
graph *vide* paragraph 4(v)  
of Annexure II.

	Surname	Name
1. Name in full (in block Capitals) (State whether 'Shrimati' or 'Kumari', if you are a woman candidate).		
2. Postal address in full to which communications should be sent.		
3. Name, from the list of centres given in paragraph 1 of the Notice, the place where you wish to take the examination.		
4. (a) Are you married ?  *(b) If your answer to (a) is 'yes', state whether you have more than one wife living/you are married to a person having already a wife living.  (c) If so, do you understand, that, if successful, you will not be appointed unless the Government of India after being satisfied that there are special grounds for doing so exempt you from the operation of paragraph 4 of the Rules.  *Strike out the portion not applicable to you.		
5. Exact date of birth (in Christian era).		
6. (a) Are you applying for the examination under age concession as:—  (i) a Government Servant  (ii) a Scheduled Caste or a Scheduled Tribe.  (iii) a displaced person from East Pakistan who has migrated to India on or after January 1, 1964.  (iv) a resident of the Union Territory of Pondicherry  (v) a resident of the Andaman and Nicobar Islands  (vi) a repatriate from Ceylon  (vii) a resident of the Union Territory of Goa, Daman and Diu.  (viii) a migrant from Kenya, Uganda and the United Republic of Tanzania (formerly Tanganyika and Zanzibar).  (b) If the answer to (a) above is 'Yes', quote the relevant clause (s) in the rules under which age concession claimed.	(a)  (i)  (ii)  (iii)  (iv)  (v)  (vi)  (vii)  (viii)  (b)	
7. (a) Place of birth and the State in which it is situated  (b) District and State to which you belong. (In case of a displaced person, the district and place in which he has settled after migration, should be stated).	(a)  (b)	
8. (a) State your Religion  (b) (i) Are you a member of a Scheduled Caste ? Answer 'Yes' or 'No'.  (ii) Are you a member of a Scheduled Tribe ? Answer 'Yes' or 'No'.  (iii) If the answer to (i) or (ii) is 'Yes', give the name of the 'Caste' or 'Tribe'.  (iv) Have you attached an original certificate from a competent authority in support of your claim? (Paragraph 5 of Annexure II).	(a)  (b) (i)  (ii)  (iii)  (iv)	

9. (a) Are you a citizen of India by birth and/or *by domicile ?	(a)
(b) If you are not a citizen of India, to what place do you claim to belong ?	(b)
10. (a) Are you a displaced person from areas which now form Pakistan ?	(a)
(b) If so, what was the date of your migration ?	(b)
(c) What was your address before migration ?	(c)
(d) Is an affidavit necessary in your case <i>vide</i> para 7(b) of Annexure II. If so, have you attached it to your application in the appropriate form ?	(d)
(e) Is a certificate of eligibility necessary in your case ?	(e)
(f) If so, do you understand that your appointment, if successful, will be subject to a certificate of eligibility being given in your favour ?	(f)
11. State your father's name and place of birth.	
12. Is or was your father a citizen of India by birth and/or* by domicile ?	
13. Did your father ever change his nationality ? If so, give particulars.	
14. State your father's postal address (if dead, give last address), and profession.	
15. What languages (including Indian languages) can you read, write or speak. Give particulars and state the examination or examinations, if any, passed in each.	

Read only	Speak only	Read and speak	Read, write and speak	Examination(s) passed

## 16. Educational institutions attended—

(a) Secondary or High School (including National Defence Academy, Dehra Dun/Khadakvasla)

Name of Institution with address	Date of entering	Date of leaving

(b) University or Universities or other places of higher education attended.

Name of University, etc.	College, if any, with address	Date of entering	Date of leaving

\*Strike out the words which are not applicable and answer the question.

17. Give particulars of all examinations passed at the University or place of higher education and degrees obtained (*commencing with the Matriculation or equivalent examination*).

Examination or degree	Class or Division	Year	Subjects taken	Name of University

18. (i) If you have, at any time, been employed, give details including those of present employment, if any:—

Designation of post held or description of work	Period		Full Address of the Office, firm or institution, where employed	Whether the employment is under Government or not
	From	To		

(ii) If any period(s) is/are not covered by your answers to columns 16 and 18(i), you should give details below:—

Period		How spent
From	To	

19. What games did you play in school and College, etc.?

(a) In School  
(b) Afterwards

20. Give particulars of any prizes, medals or scholarships obtained by you at the University or Institution

21. Have you ever been a boy scout or a member or a Cadet of University Training Corps/ National Cadet Corps? If so, give particulars as to date and ranks achieved. State also your Corps number and the name of the School or College from which you were enrolled. The Corps number *must be* stated

22. State the positions of authority, if any, held by you in:—

(a) School  
(b) College  
(c) Boy Scouts Association  
(d) U. T. C.  
(e) N. C. C.

(a)  
(b)  
(c)  
(d)  
(e)

23. (a) Are you free from debt ? (answer "Yes" or "No")  
(b) If you are under liability to repay money advanced by any institution or party for your education or for any other purpose state the particulars

(a)  
(b)

If the answer to (a) is 'No', answer (b) clearly.



24. (a) Did you apply for admission to any examination or selection held previously by the Union Public Service Commission for recruitment to any service or post under Government ? Answer 'Yes' or 'No', as the case may be . . . . .

If the answer to the above is 'Yes', supply the following information:

Name of Examination or Selection	Year	Whether you were admitted to the examination	Whether you appeared thereat	Your Roll Number
		Whether you were called for Interview		

(b) Have you applied for any other examination or selection to be held shortly by the Union Public Service Commission ? If the answer is 'Yes', give the name of the examination or selection.

25. State, in the order of your preference, the Services specified in paragraphs 1 and 2 of the Notice, for which you wish to be considered (attention is also drawn to paragraph 4 of the Notice).

You should include in the order of your preference the posts mentioned in paragraph 3 of the Notice, if you wish to be considered for these posts.

*N.B. I.*—Preferences for Services/posts with vacancies in Class I and Class II [of items (v) and (vi) of para. 1, (g) and (h) of para. 2, and para. 3 of the Notice] should be indicated *separately* for Class I and Class II.

- Similarly, Services/posts with both permanent and temporary vacancies (of paras. 3 and 4 of the Notice) should be indicated *separately* for permanent and temporary vacancies. Thus, if desired, the same Service/post may be mentioned more than once.

*N.B. II.*—Once an application is made, no change will ordinarily be allowed in the selection of Services/posts and the order of preference.

*N.B. III.*—Due consideration will be given to the preferences expressed by a candidate at the time of his application, but the Government of India reserve the right to assign him to any Service/post for which he is a candidate (of para. 14 of the Rules)

- (1) .....
- (2) .....
- (3) .....
- (4) .....
- (5) .....
- (6) .....
- (7) .....
- (8) .....
- (9) .....
- (10) .....
- (11) .....
- (12) .....
- (13) .....
- (14) .....
- (15) .....
- (16) .....
- (17) .....
- (18) .....
- (19) .....
- (20) .....

26. If you are selected for appointment to the Indian Railway Service of Engineers or Signal or Electrical Engineering or Mechanical Engineering and Transportation (Power) Department of the Superior Revenue Establishment of Indian Railways, state the Railway of your preference. (A candidate may, if he so chooses, enter against this item one or more or all of the Railways in order of preference).

27. Do you understand that Government have full discretion in the matter of appointing you to any of the Services or posts for which you are a candidate should you be selected for appointment?

28. Write in the column opposite, which of the following subjects you select as optional subjects:—

N.B.—No request for a change in the selection of optional subjects will be considered.  
Candidates who fail to state the optional subjects in respect of any of the Service(s)/post(s) concerned, or indicate optional subjects not admissible (cf. para. 2 of Appendix II to the Rules) will do so at their own risk, and may be disqualified.

(a) For Indian Railway Service of Engineers/Central Engineering Service, Class I/ Military Engineer Services, Class I (Buildings and Roads Cadre)/Central Engineering Service (Roads) Class I:—

- (1) Prime Movers

(2) Hydraulics and Hydraulic Machines

(3) Electrical Engineering

(4) Architecture and Town Planning

(5) Mechanical Engineering
- (1)  
(2)

(b) For Central Engineering Service, Class II:—

- (1) Prime Movers

(2) Hydraulics and Hydraulic Machines

(3) Electrical Engineering

(4) Mechanical Engineering
- (1)  
(2)

(c) For Central Electrical Engineering Service Class I/Central Electrical Engineering Service Class II/Indian Supply Service, Class I (Plan 2)/Military Engineer Services, Class I (Electrical and Mechanical Cadre):—

- (1) Physics (including Electricity and Magnetism)

(2) Electrical Communication Engineering

(3) Prime Movers

(4) Applied Mathematics

(5) Hydraulics and Hydraulic Machines
- (1)  
(2)

(d) For Electrical Engineering Department:—

- (1) Physics (including Electricity and Magnetism)

(2) Applied Mathematics

(3) Surveying

(4) Electrical Communication Engineering

(5) Workshop Organisation and Management
- (1)  
(2)

(e) For Mechanical Engineering and Transportation (Power) Department/Indian Supply Service, Class I (Plan 1):—

- (1) Hydraulics and Hydraulic Machines

(2) Electrical Engineering

(3) Metallurgy

(4) Workshop Technology

(5) Physics (including Electricity and Magnetism)

(6) Workshop Organisation and Management
- (1)  
(2)

(f) For Indian Ordnance Factories Service, Class I:—

- (1) Physics (including Electricity and Magnetism)

(2) Applied Mathematics

(3) Prime Movers

(4) Hydraulics and Hydraulic Machines

(5) Workshop Technology

(6) Workshop Organisation and Management

(7) Theory of Machines and Machine design
- (1)  
(2)

(g) For Signal Engineering Department:—

- (1) Physics (including Electricity and Magnetism)

(2) Applied Mechanics

(3) Applied Mathematics

(4) Construction
- (1)

Paper I.—(i) Building Materials and Building Construction, (ii) Design of Structures.

Paper II.—Roads, Railways (General Principles governing the design of Railways Roads, Harbours and other Works).

- (5) Workshop Organisation and Management

(6) Applied Electronic Circuits
- (2)

(h) For Telegraph Engineering Service, Class I:—

- (1) Prime Movers

(2) Physics (including Electricity and Magnetism)

(3) Applied Mechanics
- (1)  
(2)

29. (a) State the name of the Treasury, Bank or Post Office from which you submit a Treasury Receipt or Crossed Postal Orders and the number and dates of the Treasury Receipt or Postal Orders.

Name of Treasury, Bank or Post Office	Number of Treasury Receipt or Crossed Postal Order	Date	Value	
			Rs.	Paise

- (b) Give a list of the documents attached to the application.
- (1)  
(2)  
(3)  
(4)  
(5)  
(copies should also be attached where asked for)

## DECLARATION TO BE SIGNED BY THE CANDIDATE

I hereby declare that the statements in the application are true to the best of my knowledge and belief and that I am a—

- (a) citizen of India.
- (b) subject of Sikkim.
- (c) subject of Nepal.
- (d) subject of Bhutan.
- (e) Tibetan refugee and came over to India before the 1st January, 1962, with the intention of permanently settling in India.
- (f) displaced person from areas which now form Pakistan and a certificate of eligibility is/is not necessary in my case.

(Strike out the portions not applicable to you).

Date.....

Signature .....

Place.....

## FOR THE USE OF GOVERNMENT SERVANTS ONLY

(Vide para. 2 of Annexure II)

## CERTIFICATE BY THE HEAD OF DEPARTMENT OR OFFICE

1. Certified that Shri/Shrimati/Kumari ..... holds a temporary/permanent post under the Central/State Government in the Office/Department of..... His/Her character, as far as known to me, is good and I am not aware of any circumstances which show that he/she would be unsuitable for appointment to any of the Services, if successful in the examination.

Certified also that he/she submitted his/her application to the Department/Office on..... for onward transmission to the Commission.

\*2. Certified that he/she has been confirmed in the permanent post of..... in the Office/Department of..... with effect from.....

\*3. Certified that he/she has been continuously in temporary service under the Central Government in the post/posts of..... in the Office/Department of..... with effect from.....

\*4. Certified that he/she was recruited as a temporary Assistant Engineer in the Indian Railways through the Union Public Service Commission to the..... Department.

\*Strike out if not applicable.

Signature.....

Designation.....

Department.....

Date.....

ENGINEERING SERVICES, EXAM., 1965.

